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President Taft on the Sherman Law.

At the dinner of the League of Republican Clubs, in New York, recently, President Taft mentioned the Sherman law as follows:

"Every one will now admit that the Sherman anti-trust law, passed twenty years ago and since subjected to a great deal of judicial construction, is effective for the purpose of breaking up combinations that result in the suppression of competition and the establishment of monopolies."

Apparently all that is needed now is to send Senator Crane, the political pilot of the Administration, on a vacation and give Attorney General Wickersham the word, and we shall get that much needed action on the telephone monopoly.

The Busy Day.

Did you ever have work pile up till you scarcely knew which task to begin first? Did you ever lose time pondering, confused, doing little?

The one duty of the wooden Indian in front of the cigar store is easily performed. But in the life of *real* men, complexity is the rule and we must learn how to handle it.

If all the daily duties of a telephone man could be presented to him in the morning with the assurance that no more would be added, his course would be comparatively simple.

But in actual telephone work, duties do not come in this manner. Few or many may be on hand in the morning. As the day advances new troubles are reported and new duties arise. One man files the cases in order of receipt and stolidly works on them in that order, regardless of relative importance. Another man has the tendency to drop the work in hand to take up each new thing, under the mistaken impression that the latest is more pressing. The first man gets something done, but antagonizes people by needless delaying matters of immediate importance. The second man rushes from one duty to another in a frantic endeavor to keep up, and gets little completed. Though an extreme case, this tendency is to be seen every day. It naturally gives rise to a feeling of paralyzing dismay.

Let us analyze the situation. Here is a mass of work. Usually it is composed of a large number of things. How long would it take you to do just *one* of them? Not long, say fifteen minutes. How long for the next *one?* Perhaps ten minutes. Well, you need do but one at a time. If you have eight hours in the day and your average task requires half an hour, you could do sixteen in a day. That looks good,

in theory, but why is it that in practice you complete scarcely half that number? Because when you see a large number you hesitate to attack any one of them.

To delay, hesitate, and fool along is not gratifying to your manhood. By promptly doing each duty you can satisfy both yourself and the company. Pick out one item, look at it a moment, then attend to it as if there were no other duty on earth. When completed, pick up another item, treat it in the same way and pass on to the next. It is surprising how much can be done in a given time.

There remains the important duty of deciding which things are most pressing, so that unimportant matters shall not delay those of greater moment. Suppose you are working on a matter when another thing comes to your attention. This is no time for snap judgments, though you may make your decision in a few seconds or minutes. As a first guiding rule, never drop the present luty for a new one unless the latter has such pressing arguments as to relieve you of all uncertainty. This prejudices you against dropping the present task and is a force in the right direction.

The second question is: Which duty will more greatly affect the service? If the present work is to restore service to a subscriber who is entirely cut off and the new affects general service in a minor way, stay by the work you are doing. But if the new trouble jeopardizes the service of a whole position or section, your course is plainly in favor of the greater number.

The third question is: Which duty will more greatly affect the profits of the company? **By giving service** you are to make money, for without profit the telephone business will fall to pieces. Don't neglect a big leak in order to stop up a small one. Don't fail to stop a small leak which may almost instantly become a big one if not caught at once.

To sum it up:

Don't hesitate. Attend first to the duties which most greatly affect service and profit. Finish each promptly; do not be diverted.

A. T. & T. Service to Licensees Should be on Cash Basis.

Whenever regulation of a licensee of the Bell telephone company is undertaken by a municipality or state public service commission in good faith, one of the principal topics for discussion will be the reasonableness of the money relations between the licensees and the parent company. The A. T. & T. plan of extracting from the licensee 4 1-2 per cent of gross earnings is unbusinesslike and reprehensible in the light of present-day advanced theories of regulation.

If four or five commissions in various states should simultaneously undertake to obtain an accurate estimate of the fair cash value, over a period long enough to give a fair average of the service rendered by the A. T. & T. Co. to the licensee in return for its 4 1-2 per cent of gross earnings, we believe that there would be a great discrepancy between the cash values of the service in proportion to the cash equivalents of the returns, and that considerable discrimination would be revealed.

Where companies are urging so strongly that the public grant an 8 per cent dividend, 4 1-2 per cent of gross income is an item worth scrutinizing carefully, when operating expenses run around 70 per cent.

If the stockholders of Bell licensee companies throughout the country can get a few competent commissions to look into this case they may find that it will work out to their advantage. Apparently the 4 1-2 per cent basis was fixed by the A. T. & T. Co. when it held the whip hand over the licensee, and could force a deal on its own terms.

What is a Residence Telephone?

The superior court of Elkhart, Indiana, has allowed Dr. Mast, a former subscriber of the Elkhart Home Telephone Company, damages in the sum of $100 against the company. The doctor formerly had a residence telephone, for which he paid $1.50 a month, but the company subsequently classified it as a business telephone and raised the rate to $2.50. This increased rental the doctor refused to pay, and, upon the company taking out the instrument, he retaliated by filing suit for damages with the result just stated.

If this decision were to be interpreted as meaning that a physician's telephone is a residence telephone instead of a business telephone, it is clearly wrong and should be reviewed by a higher court. A doctor's telephone, even in his residence, should be classified as a business telephone because of the extensive use to which it is put in the subscriber's practice. But here the company had previously recognized the service as residence service and the court evidently considered it just to hold the company to the construction it had already put upon its contract. Were the court dealing with a case in which the question was raised by the company against a new subscriber, we think the result would and should be different.

Bumper Crops and the Telephone Market.

King Corn is making the farmers prosperous in many sections of the country.

Farmers are the people who are buying telephones nowadays. Reports of incorporations show every month a large number of new organizations in the various states built to develop telephone service in rapidly growing sections where *land* is being made into *farms*.

Good crops create business and social demands for rural telephone service, and the farmer likes to supply his own. He is a natural Independent. His situation is Independent and his feelings are Independent, and so are his sympathies.

Independent manufacturers long ago recognized the farmers' telephone needs and several of them have devoted so much attention to this class of business as to prepare really admirable books, written from a wholly disinterested point of view, telling just how to get up the organization of a company, and build the lines and install central office equipment and telephones. We anticipate that next year there will be a bigger demand for these books, and the material they describe, than ever before.

The corn crop, 9.01 per cent. greater than the annual production of the preceding five years, means prosperity for the farmer, and no prosperous farmer can do without telephone service.

Practical Compulsory Interchange of Service

A Paper Outlining the Position Formulated by Mr. Gary While President of the International Asso. in 1907

By Theodore Gary

I have always been opposed to connecting with the Bell, or forming any partnership with it under contract. At the same time I have for several years favored intercommunication and physical connection under regulatory law. Interchange under provision of law would be an entirely different thing from voluntary relations, because the Bell would then be compelled to do just what the Independent companies were compelled to do,—no more, no less; the no less is important..

In my annual address at the National Association, January, 1908, I proposed to say something on the subject of Physical Connection, but after the advisory committee had listened to the following, it was unanimously decided to blue pencil all references to physical connection.

Compulsory Intercommunication.

No plan of intercommunication will be a success that does not give the public better service, and at the same time preserve the present investment, and lay the foundation to increase and take care of the expanding business.

The public is daily enlarging its views of the rights it has with regard to concerns operating under franchises, and the drift toward complete control of all public utilities is quite rapid. Control should be welcome; confiscation steps must be opposed.

Does the public demand such connection? If it does, what is the best move to make so that the investment of each company can be protected and made remunerative and allow such an interchange of business? These are live questions.

There is no doubt but that a much larger field is waiting development. Would intercommunicating connection aid in developing the telephone business by enabling companies to find ready funds and develop their respective businesses? If harmony and interchange of telephone business were going on through the country, and the growth of the business keeping up, the service rendered satisfactory, it might be that the public would readily take to telephone investments.

Telephone service is different from any other public utility service. The get-ready, or annual charge must carry with it the right to receive incoming calls. An important difference between the telephone get-ready-to-take-service and other public utilities is the importance to each subscriber of having other subscribers, while in the case of gas, electric light and water companies it would make no difference to the consumer whether there were many or few other consumers. It would still be possible for him to receive satisfactory service.

In the early days of railroading, the roads were mostly owned by small companies with but a few miles in each as compared with the present day system, and when interchange of business with a through billing was proposed, many companies opposed such arrangement, except in cases where it was mutually agreed to make such interchange. Cut rates and loss to investors were common occurrences. There were many physical obstacles; the matter of gauge, different heights of cars, couplings, drawheads of different heights and makes, really could not be interchanged. Naturally there was opposition by some railroads to the plan of through billing of freight, but all has been worked out by compulsory interchange, and no one can doubt the practicability and wisdom of the railroad system as enjoyed today. It renders the highest class of service, and with the least inconvenience to the public, at a reduced cost.

Would it be possible that what has proven a desirable arrangement for railroads might prove just as desirable in the telephone business, keeping in mind all the time that the telephone differs particularly in the one thing heretofore referred to—that every subscriber is interested in having other subscribers in order to make his service valuable, while with the railroad it would be possible to render satisfactory service if but one passenger traveled or one person shipped one car of freight over two or more roads. If telephone service under such condition would be a better service, and just as remunerative, it only remains for men to work out a plan under which such a service can be put into practice.

Let us look at the practicability of such service, passing the mechanical and electrical questions. While it would be possible for what are known as the Bell telephone interests to get together and make a business arrangement of any kind, if they so desired, since their entire interest is practically controlled by one board of directors, it would not be possible to get what are known as the Independent telephone interests together since the ownership of these properties is controlled by many different persons.

The practicability of intercommunicating connection between Bell and Independent telephone companies must be considered. If the railroads, that were perhaps as antagonistic as the present telephone interests, are taken as an example, it would seem that it might be made practicable.

If physical connection is to be forced, it should be engineered and handled by the friends of the business, and those who have the investment in and understand the business; they are more competent to take care of the business and the public and fix reasonable rates than the average legislator or commissioner who might be appointed by a state or municipality to draft such a law.

The interchange of business between local companies presents a more difficult problem than an interchange between long distance companies, and can only be done on some measured service plan. The tendency of operating companies in the larger centers is towards measured or limited service, and there is little question but what the day will come when every telephone will be put on terms similar to that governing the use of gas, water, electric light and power, providing an initial charge or an annual rental is made for the telephone, sufficient to cover the expense of get-ready-to-take, or use service, including incoming calls, and all outgoing service paid for at so much a call.

It is not a sensible thing for those interested to think out a plan that would work to the advantage of the public, and at the same time preserve the integrity of the investment in the respective properties? Since, on account of the diversity of interests, it is quite evident that it cannot be brought about by mutual consent except in isolated cases (and that should be discouraged) there seems to be but one avenue through which intercommunicating connection can be brought about—legislation—and it is doubtful whether a law can be made and enforced that provides for local intercommunicating connection so long as the flat rental service prevails.

It is the opinion of many that physical intercommunicating connections between companies by legislation will only be a question of time. Every state in the union will place a law on its statute books undertaking to force physical, intercommunicating connections, and the law will be passed, in face of strenuous opposition of the combined telephone interests, unless good reasons can be shown why it should not. A growing demand on the part of the public for a telephone service less inconvenient will be the basis of the demand.

The public, while pursuing this course, is not likely to take into consideration the financial end of the business, and those engaged in the business are apt to overlook a primary factor in carrying on a public utility concern; that is, the public. The public must always be considered as one of the parties if any plan is to be successful.

In order to have an equitable law, the united telephone interests should evolve a working plan and enact it into law. Until a feasible plan can be devised and made universal, all physical connections should be opposed for the reasons given. physical connections should be opposed for the several reasons given.

the two telephone factions, and that through legislation, with ample time allowed so that the companies can properly equip the plants with necessary trunking systems and attach a meter to each telephone. Local interchange would undoubtedly destroy many companies and competition, unless made universal and the whole business placed on the measured service plan. Fight intercommunication unless it is made universal by law, with plenty of time allowed to make necessary physical changes to plants!

This question should be referred to a committee and any one having anything to say should reduce his opinions to writing and hand them to the committee.

Co-operation vs. Universal Connection

Some False Pretensions—Telephone a Local Issue—Bell Universality a Dream of Greedy Financiers

By J. C. Kelsey

Co-operation is a human attribute.

Men flock together through fear and necessity, for protection, easier livelihood and other economic reasons.

Co-operation signifies harmony, which is the strength and support of almost every human institution.

The word "universal" goes beyond earth-worms or finite beings.

It signifies something infinite and above human ken or reach.

It comprehends the spheres.

It includes God,—

And the Angels.

Universality contemplates the round trip of Halley's comet with as little excitement as you can get out of the movements of a local freight train.

The Comet that amazed and terrified us with its magnificent proportions, is to the Universe but a mere atomic action.

As you look into the stars, and try to realize that the nearest fixed one, if suddenly destroyed, would require 3,000 years before the change in light struck our eyes, you have a faint idea of Universality.

Yet if you look into the advertising sections of any magazine, your startled eyes will behold claims of one grand and Universal system.

A "Universal System" of what?

Sun, Moon, Planets, Comets, Stars, Cosmic Duct and all?

No, merely of Bell telephones.

It takes nerve to establish a claim to the heavens,—

But this organization, apparently chartered under an act of God, attends to no man's law nor logic.

Universality is impossible, because it takes on the infinite.

Co-operation is human, and within the reach of finite beings.

We are accustomed to its meanings and uses, and need little to remind us of its necessity.

When the French settled around Quebec, in the early sixteenth century, they were beset by hostile Indians and wild animals, as well as by rigorous weather.

Such a community had to be upon a strictly co-operative basis, or else the game would have been a case of the "Survival of the Fittest."

They accomplished this by giving each settler a farm an acre wide, and running as far back over the hills as desired.

Each two miles, a large stone church was built, not only to serve for worship, but as a fort.

Sixty families or more were gathered about the church—no one being more than a mile away.

This was Co-operation. This was union and resulting strength. Naturally they survived the Herculean difficulties of the times.

Unconsciously we settle in communities, and the rest of the world goes peacefully onward without interesting us.

You never see a Kansas City paper in Chicago, nor a Chicago paper in New York.

Kentucky folks, of course, read what Henry Watterson says.

We are simply a group of nations, and not one grand new National organization that some politicians are trying to claim.

The Independent telephone business began as a purely local need.

A community need alone,

To call the butcher,

The baker or

doctor.

The farmer to call for crop reports or reach the doctor quickly.

If you give your patron a reasonably saturated local service, you have accomplished 90 per cent of your duty.

If you can give your country patrons good service to the county seat, you have added 8 per cent to the fulfillment of your obligations.

If you could possibly connect with your State capital and most of the cities and communities of your State, you have 1½ per cent more to satisfy the proper telephone manager's conscience.

If the alleged "grand and universal system" should offer you connections with other States, it offers you just one-half of one per cent.

The old Scriptural idea of making a fuss over the one sheep that went astray, and awarding no medals to the faithful 99, has some counterpart here.

Although the Bell can offer but one-half of a sheep, there are some apparently ready to desert the 99½.

If you will study the demand made upon you for Bell connection, you will find it made by the people who send off for their goods, and do not like to pay for what they get at home.

Just look into this—

Talking about this "Grand and Universal" service, would it be a grand thing for your customer?

When a daughter or son has membraneous croup, they could call a Boston or New York specialist.

When his farm machinery breakes down, a subscriber could call a New Haven blacksmith.

When his horse gets sick, he could call a Baltimore specialist.

When he wants grain reports, he could call the New York Exchange.

But he does not!

He gets all these things at home.—

The telephone, a local issue, reaches every man he may desire.

The universal idea is a forlorn hope.

Every Bell man is now trained to utter his belief in one grand and universal telephone system.

It gives him something to start from,—

But it leaves him a great deal like Aesop's astronomer,—

Having his head in the stars, he fell in a well and perished.

We are all material people, and have little time for the stars.

Having our battle 99½ per cent won, why should we temporize with an enemy?

The weakest link in this Universal Bell chain is, that no contract made by a Bell official will hold.

It can be broken at will by a higher authority, on the ground that the local Bell officials exceeded their power.

Besides, a universal policy can take no cognizance of any local policy at all.

All must be sacrificed that the great "grand and universal system" shall live.

The parent Bell company has a reputation for respectability and conservatism which it by no means deserves.

Ask your banker about them and he will assure you that they are a great concern.

Simply because he thinks they have the money.

Stockholders of Bell properties have had their troubles.—

They have been hornswoggled out of their dues, either by criminal intent or ignorance.

Both are culpable.

A great parent company, with no mercy toward its own licensee stockholders, will have no mercy at all to those who enter into truce contract relations with them.

Think of that, too.

Heretofore, one can hardly blame the Illinois Independents for wanting Chicago.—Now we have Chicago ready for connection.

But Bell connections are no advantage anywhere else.

Missouri Independents have St. Louis and Kansas City.

Kentucky has Louisville, Lexington and Frankfort.

Every need of telephone service is at the subscriber's disposal.

In any fight, the victor can be magnanimous,—

But not too much so, when the enemy's characteristics are so well known.

Go slow on considering any proposal from them.

Independents have been recognized.

Even though Morgan may be acting for the Bell, he gave the Independent child its first touch of legitimacy.

And being legitimate, controlling, too, 99½ per cent of the situation, why should the Independents feel and fear?

And then, each little surrender to Bell temptation is recorded and heralded by the Bell press bureau as a death notice of some powerful Independent!

Strange, too, that the Bell cares to make contracts.

Way back in 1898, they gave the Independents three years to live.—

Today, Independent operators and manufacturers are given three years more to live.

Why three?

Some Independents argue that the large Home companies are selfish and hoggish.

They claim the Bell are more liberal.

Relatively, it may be that the Home companies do appear selfish.

But compare them, if you please, with the contracts the Bell offered ten years ago.

And how long will this rapacious and alleged Universal System, which once joyfully consigned Independent plants to the flames, resist from indulging this favorite pastime of arson?

This is the Bell man's dream.

By some hook or crook, he hopes to control *again*.

In sublime ignorance, this type of human ostrich cherishes that hope.

They advertise in daily, weekly, monthly and yearly magazines.

They spend millions trying to mould public opinion.

Yet without millions for advertising, and more millions for solicitors, you have already accomplished the moulding process.

What little discontent I have noticed among Independent telephone men, is caused by a natural desire for a change.

Yet you never saw a telephone man who, selling out, was happy for an hour until he was at it again.

It is a good business.

You do not wear out rails, or kill forty people in an interurban car.

You collect your money in advance.

You are less affected by changes than any other public utility.

You have a competitor, so easy to defeat that it is a shame to have so little to do.

Your only necessity is to get your own house in order.

If your rates are too low, an intelligent campaign among your friends and people will lead you to increased rates.

People do not appreciate gifts, and only appreciate that which costs the most.

No reason exists why telephone interests can not share in this human weakness.

Get your house in order, so that your business is profitable.

A profitable business need fear nothing but an act of God.

By profit only can we achieve true independence—and merit respect.

Independent telephone men—you are in a bread and butter business.

There is little or no cake in it.

You can not afford to dream,—

And your feet must stay on earth.

Only by helping each other do we overcome the natural obstacles of life.

You can not do this on too large a scale.

You remember the bully who claimed he could whip *any* man in the United States.

Upon returning to consciousness, he said his trouble was that he tried to cover too much territory.

That is Universality. It covers too much territory, and it means too little to any individual or group of individuals.

Universality offers no practical benefits.—It is not practicable.

It is merely the forlorn hope of a financial fiasco.

Co-operation is practical and has been tried.

It leads to all that makes for the common good.

Moral: A bird in hand is worth two hundred in the Bell bush.

Loaded Aerial Lines in Germany*

By Dr. A. Ebeling

Translated from the German Text by Franklin H. Reed.

The Line from Berlin to Frankfort-on-the-Main—Third Equipment.—Up to this time it had been the custom to make the apparatus as light as possible, but now it was necessary to take up the problem of constructing apparatus capable of resisting all temperature changes. At the same time it was essential that this equipment should fulfill one condition which had confronted the experimenters from the beginning, namely,

Fig. 11.—Mounting of Simple Coil Case Upon Special Insulators With Separate Lightning Arresters.

that the insulation of the line should not in any manner suffer from the insertion of the coils.

The line from Berlin to Frankfort-on-the-Main was a third time equipped with apparatus to fulfill all these conditions, and built with care in accordance with the results of actual experience. Fig. 11 shows the type of apparatus employed, as it appears when completely assembled and mounted upon cross-arms. Fig. 12 shows the details of the apparatus. The coil is enclosed in a metal cap, completely sealed with solder, from which the terminal wires emerge through porcelain insulators. Nothing remained but to make the junction of these insulators with the cap watertight. This point was naturally very important, because it was the only remaining one which could be the cause of disturbances. The metal protecting cap prevents the rain from lowering the insulation of the insulators. Moreover, there hardly remained any cause to fear damage from mechanical causes. The actual holder is screwed down upon an insulator so that it may be changed conveniently when need arises. Here, also, the lightning arrester is independent of the coil case.

The coils themselves were the same as those of the second experiment; but some additional new coils were made in order that the change of equipment might be made a coil at a time without delay.

The values of the coils were checked as the changes were made. The greater part of these values remained constant, or, at least, they varied only a very little. The mean value of the self-induction of the coils was about .105 henry, and the greatest variation was in general about .010 henry, that is, about 10 per cent. But the values of all these coils returned to their original measure as soon as the coils were demagnetized.

The mean effective resistance of the coils was about 5 ohms. From this is deduced β=.00176; hence the line is almost exactly equivalent to an unloaded line of 5 mm. wire. As the length of the line is about 580 km., β=1.02, while for a line of 5 mm. diameter and 540 km. long the value of βl is about 0.95.

When the line was re-loaded there was obtained, as expected, the same result as in the case of the second experiment. The Pupin line of 2½ mm. was completely equivalent to an unloaded line of 5 mm. wire. It was also observed that the second line gave exactly the same results, not only in relation to the intensity of sounds (volume), but also with respect to the clearness of reproduction (enunciation). A practical telephonist believes that an ordinary aerial line gives the best communication with respect to enunciation which can be obtained. It is, therefore, natural to inquire with respect to the distinctness of speech, that is to say, to the timbre of the voice, whether the loaded line would not be inferior to the unloaded. These experiments proved that it is not.

The lines were compared according to a method for which we are indebted to Prof. Dr. Breisig, with an artificial cable set up in the laboratory; the values of βl for this cable are determined with great precision. We shall not take the time to discuss this method, but will simply say that the results are obtained by comparative talking tests. That is, they correspond to the conditions of practice.

Table *A* gives the values which have been obtained for βl on two different dates as for the line of 5 mm. of 4 mm., and for the loaded line. The mean of the values observed is

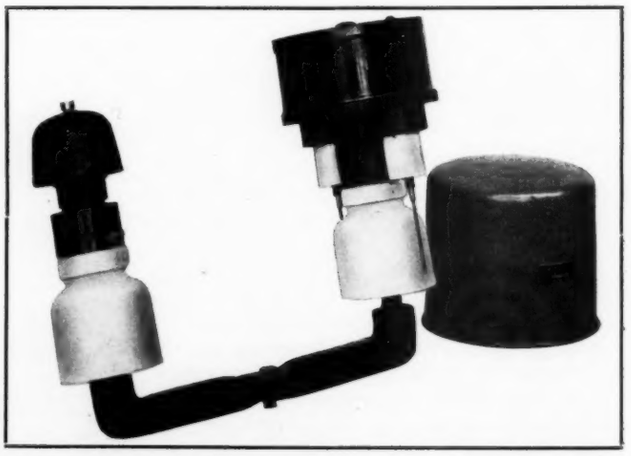


Fig. 12.—Cap Removed from Coil Case, Showing Interior Construction.

given in one column, by the side of which is the column showing the calculated values.

Line.	βl Observations.		βl Mean.	βl Calculated.
5 mm.	1.4	1.2	1.3	1.0
4 mm.	1.9	1.9	1.9	1.5
Loaded line, 2.5 mm.	1.4	1.2	1.3	1.0

Concluded from Issue of November 5.

It is apparent that the relative values for the calculations and observations agree fairly well, but this does not hold with respect to the absolute values, although the difference is not considerable.

Later there were made new comparative talking tests after having connected to each of the three lines a 200 km. line of 2m. bronze wire. Table B indicates the observed values and the calculated values. For the latter it is assumed that the attenuation coefficient of the additional 200 kilometers of line is $\beta l = 1.8$.

Line—	βl Observated.	βl Calculated.
5 mm. + 20 km. 2 mm.....	2.9	2.8
4 mm. + 200 km. 2 mm.....	3.3	3.3
2.5 mm. loaded + 200 km. 2 mm.....	3.4	2.8

With the exception of a difference of $\beta l = 0.1$, which may easily occur in comparative talking tests, observations and computations agree exactly for the non-loaded lines. With respect to the loaded line combined with the 200 kilometer line of 2 m. wire, the observations agree with the talking tests, from which it results that the transmission power of this combination is equivalent to that of the line of 4 m. wire combined with the 200 kilometer line of 2 m. wire. As for the agreement established between observations and calculations for the non-loaded lines of this table, can it be attributed solely to chance? Later experiments will show. In any event,

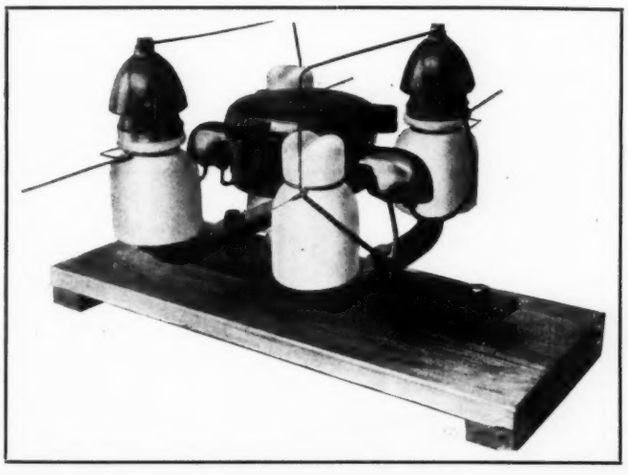


Fig. 13.—Experimental Equipment Used on the Line from Berlin to Magdebourg. The Coil is Compound Wound.

these tables show that the calculated values are not widely different from those which have been obtained in reality.

It is now (May, 1909) approximately a year that the line from Berlin to Frankfort on the Main has been in regular service with this new equipment without the least damage having occurred to the coils or the lightning arresters, although the line has had to undergo the stormy period of the past summer and the periods of cold of last winter.

The results which have been described above and which were obtained by comparative talking tests on the line from Berlin to Frankfort on the Main appear to be confirmed by measurements which have been made recently with oscillograph.

Lines With Double Coils.

When simple coils are used it is necessary to install special holding cases for each wire. That is to say, it is necessary to use two cases for each coil station. With double coils, on the other hand, each coil station carries but one single holder because the same iron core serves for the two windings corresponding to the respective line wires of a metallic circuit. As one might expect that the double coils would be less costly to build than simple coils for each coil station, and that with the double coils the symmetry between the two wires of the pair would be better maintained than with simple coils, the Siemens & Halske company soon decided to make an experiment intended principally to determine if such coils would sufficiently resist lightning storms. The values of the double coil windings remain the same when the two windings are

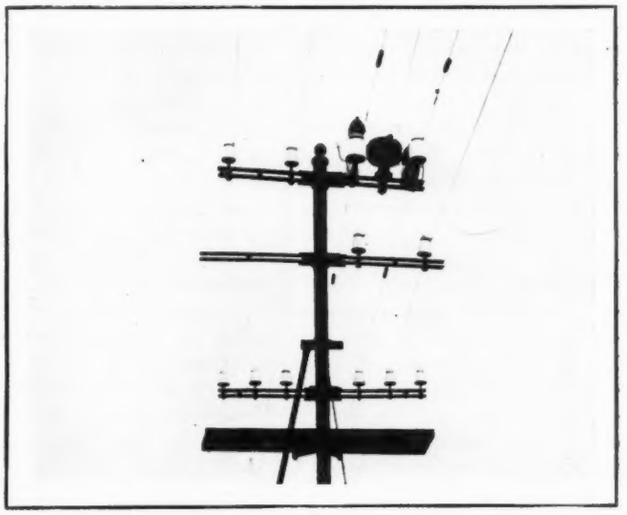


Fig. 14.—Experimental Equipment with Double Coils Installed Upon the Berlin Magdebourg Line.

built exactly alike, even in case of strong magnetization of one side. That is proven by the measurements by M. Nowotny upon some of the double coils furnished by the Siemens & Halske company to the Austrian Minister of Commerce.

First Experiments with the Double Coils.

As it was principally a question of determining, in the experiments with the double coils, whether the storms would produce frequent troubles, it was sufficient to make this experiment upon a short line. The line from Berlin to Magdebourg, which traverses a very stormy section, being very suit-

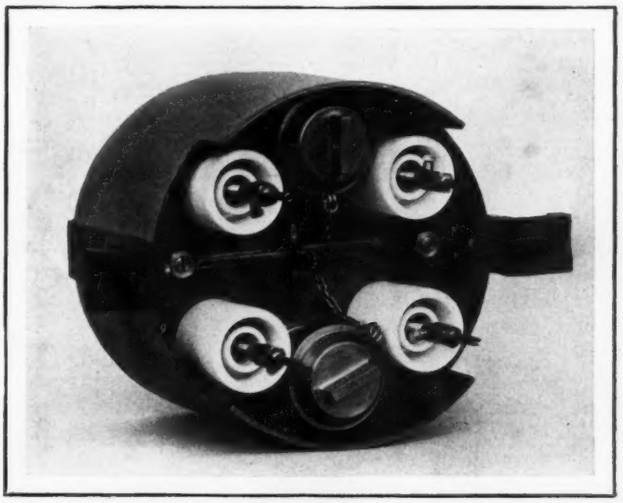


Fig. 15.—Lower Portion of a Case for Double Coil and Associated Lightning Arresters.

able for such experiments, the Siemens & Halske company requested from the German Postoffice Administration authority to mount double coils upon this line in place of the simple coils which were removed. Fig. 13 shows the equipment. An iron pot in which is placed a double coil carries two sleeves of ebonite, through which pass the wires which proceed from

the two windings of the coils. This pot is mounted directly upon the cross arms between two double insulators. One of the insulators of each group of two carries a lightning arrester. Fig. 14 shows the apparatus mounted upon a cross-arm.

These coils have remained mounted upon the line during several years, and there has only been a single occasion when a coil has been injured by a lightning stroke. One should not forget this point, that from the viewpoint of present practice the first apparatus must be considered as very primitive so that not even this single case would occcur, perhaps, if the construction of the holders had been more perfect. After these results, several telephone lines were equipped with double coils.

Double Coils in a Metallic Box.

The Railway Administration of Prussia has used upon a large scale holders containing double coils with lightning arresters enclosed in the same case which have been in service for about two years, without any trouble, and which have given excellent results. In a section where violent storms occurred during the summer of 1908, no coil and no lightning arrester has suffered damage, although the lightning arresters have operated, which is easy to prove. Fig. 15 shows an assembly of all the apparatus as well as the separate parts. Fig. 16 shows two equipments of this type mounted upon cross-arms for two metallic circuit lines.

The Austrian Minister of Commerce has likewise had some lines equipped with double coils. M. Nowotny has published articles upon this subject. There has been obtained in every case the increase in intensity (volume) of the sound which was expected. We shall not stop here to speak of the different lines loaded with equipment of the more recent types because additional communications will doubtless be published relative to all of these lines. We shall confine ourselves solely to the fact that the loading of telephone lines has already been done or is actually going on in several sections of Germany and in several foreign countries, and even that a long line of this system is under construction in the tropics.

The Economic Value of the Loaded Line.

It follows from the preceding discusson that the use of the Pupin system on aerial lines has given good results in every case with respect to the improvement of transmission. Mechanical difficulties may likewise be considered surmounted by the use of the recent types of coils constructed with due consideration to the knowledge acquired by experience. To show the economic importance of the Pupin system for aerial lines we shall give an example. Suppose that it is a question of loading a 3 millimeter bronze line. The coil stations will be separated by about 8 kilometers for the experiments made by the Austrian Minister of Commerce have shown that the aerial line should not be loaded so heavily as was done at the beginning, (tablant M.?) upon the greatest security possible. Under these conditions a loaded aerial line of 3 millimeter bronze, attains at least the transmission capability of a bronze line of 5 millimeter wire without coils. Figuring broadly and taking account of the effects of reflection which are produced when one connects an ordinary line to a loaded line, and which may cause a certain diminution in volume of transmission, one may admit in every case that the power of the loaded line is equal still to that of an ordinary line of 4.5 mm. wire. Assume that the price of bronze wire is 1.7 marks per kilogram, which is not far from the mean price, and further as-

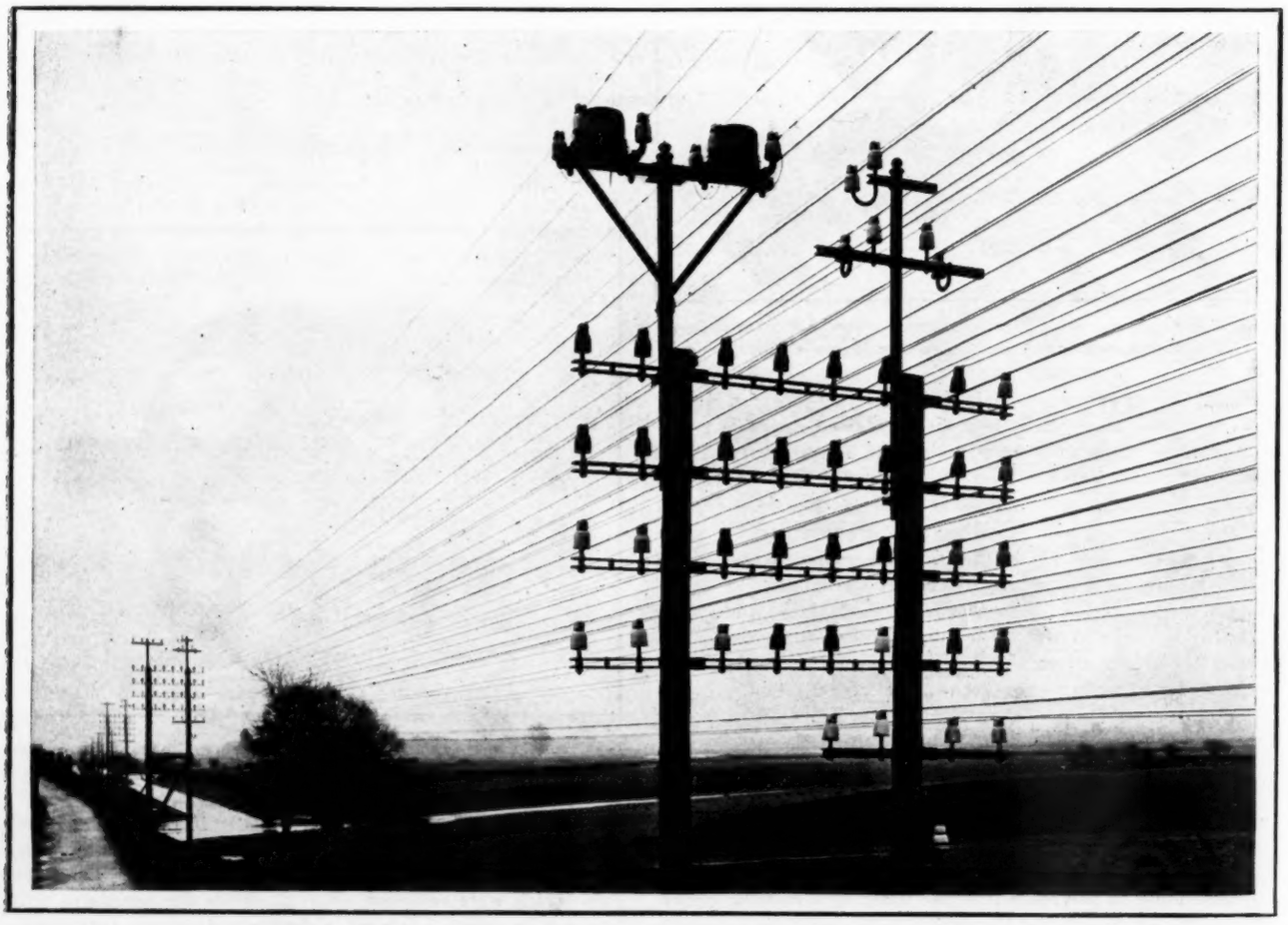


Fig. 16.—Two Lines Equipped with the Type of Apparatus Shown in Fig. 15.

sume that the price of wire will be proportional to its cross-section. We shall have:

Price of 1 km. of metallic line of 3 mm. bronze wire, about .....220 marks
Price of 1 km. of metallic line of 4.5 bronze wire, about .....500 marks

Let there be a saving of 280 marks per kilometer in the price of the wire. One must deduct from this the price of the coils, which is about 50 marks per kilometer. For example, the kilometer of 3 millimeter wire, loaded, costs then 270 marks, and the economy with respect to the 4.5 millimeter line is about 230 marks per kilometer. One may say that a loaded wire does not cost more than one-half as much as an ordinary wire.

Figuring the price of the 5 mm. wire, which is about 620 marks per kilometer of metallic line, and of which the transmission capability is generally reached by the loading of the 3 millimeter line, the economy is about 350 marks in place of 230 marks.

Let us assume that it is a question of 600 kilometers of line. We shall have:

Price of 600 km. of metallic line of 5 mm. wire .....372,000 marks
Price of 600 km. of metallic line of 4.5 mm. wire .....300,000 marks
Price of 600 km. of metallic line of 3 mm. wire .....162,000 marks
Economy with respect to the 4.5 mm. wire, about .....138,000 marks
Economy with respect to the 5 mm. wire about .....210,000 marks

In accordance with the preceding, aerial lines according to the Pupin system require no up-keep greater than an ordinary line, now that the faults of the first equipment have been avoided in the new types. Under these conditions there is nothing further to interfere with the enormous economic advantages of the Pupin system being profitably adopted to aerial long distance lines.

Why Booths Increase Pay Station Business.

The Dry Goods Economist of New York, discusses the telephone for customers as a modern convenience for adding to trade, on the same principle that comfortable rest rooms, etc., draw women customers. Under the headline "Telephone Pulls Trade" it prints the following:

"One of the latest developments in the store equipment field is the adoption of the enclosed telephone for the use of customers. Until comparatively recently the telephones that were maintained for the accommodation of customers were considered more or less as a necessary evil. The customer took up the time of the exchange girl, talked too long, asked for the wrong number, etc., and her little nickel or dime was not thought much of.

"That was when most of the public telephones were of the small table or desk variety, which had no good features, but a lot of bad ones. The person who used the store telephone could not hear what the party at the other end said, and vice versa. In addition, every one around her heard what she was talking about; there was no privacy.

Booth Great Improvement.

Then came the booth, but at first it was installed on a rental basis. This turned out unsatisfactorily both to the company and the merchant. Finally the telephone companies decided to put in booths on a strictly sale basis and, after careful consideration, some merchants made contracts for the installation of telephones in sound-proof booths. This, of course, has reference to the telephones used by customers, as the house service is kept separate and paid for on a separate contract.

Merchants Make Discovery.

Then the merchants who adopted these booths discovered something. They found that their paid telephone service in some cases doubled and tripled, with corresponding increases in the net profits, and the switchboard operators' records showed that the number of calls from booths was out of all comparison with the decrease in calls from the desk telephones. In other words, the booth installation resulted in a large increase of calls. People seemed more inclined to use a telephone, provided they could do so without being overheard.

Must Be Easily Accessible.

When this condition was realized the selection of the proper location for the customers' telephones became a matter of importance. The booths were no longer put in out-of-the way corners, but in places easily accessible. In the New York store of John Wanamaker, for instance, the booths are built in between the tea-room and the customers' writing room. In R. H. Macy & Co.'s store, the principal installation is in the basement, where twelve booths are kept so busy that it is necessary to have both a separate switchboard operator and cashier.

With the realization of the revenue-producing qualities of the telephone came also a demand for improvements in the booth. One of the results is the receding door, which is peculiarly adapted to the needs of department stores, because it admits of the use of the booth in spaces where swinging doors would be an impossibility.

To Ventilate the Booths.

The question of booth ventilation is worthy of consideration. Unless some means of replenishing the atmosphere are provided the air in the booth becomes over-heated and malodorous. The ordinary electric fan jars with its vibrations the light partitions of the booth, and often is very noisy. Accordingly, many of the latest installations are equipped with a fan especially designed for use in telephone booths. The motor and the fan are suspended from a bracket by an ingenious arrangement of springs, so that vibration and noise are at a minimum.

As already mentioned, the location of the customers' telephone is important. It must not only be easily accessible, but so placed that customers to reach it must pass by special displays of goods, which they are only likely to buy because they see them.

Rural Telephone a Boon to Automobilist.

A prominent attorney in one of the larger up state cities recently recited an experience with his six-cylinder automobile and the use of the rural telephone, says Wisconsin Telephone News. He relates that he was returning home from Milwaukee, and when several miles south of Fond du Lac the auto complained several times and finally refused to go any further. After certain remedies were applied, it developed that the gasoline was exhausted and it behooved the attorney to get some of the liquid. After walking up the road about a mile, he awakened the farmer, and with profuse apologies for having disturbed the slumberer, he was granted the use of the farmer's telephone to call a garage in Fond du Lac and have a machine sent out with a supply of gasoline. The attorney says that never before had he appreciated the use of a telephone in the rural districts so much, and now he is approving and welcoming the development and use of the rural telephone in a most hearty manner.

And With Us, Too!

If the Bell company would spend more time and money to the improvement of its service and give less attention to politics and to influencing lawmakers, it would have a better standing with the public.—*Grand Island* (Neb.) *Press*, Nov. 4, 1910.

Pole Inspections and Replacements

Until recent years little attention or study was devoted to systematic methods of making pole replacements; that is to the replacing of such poles as had suffered damage from natural causes. Through all the early years of telephone extension no records or statistics were kept which could be made use of in after years as a basis upon which to work. In those days poles were plentiful; so plentiful in fact, that buyers were permitted to select or reject poles at their own sweet will. Poles were cheap. Dealers and users were short-sighted. The users are now paying the toll for the extravagance during the years of plenty and to spare. The actual waste resulting from the unsystematic methods of both users and dealers must have amounted to millions of dollars. Recently a united and systematic effort toward conservation has been found necessary.

In the beginning poles were graded according to length and the diameter at the top. Users, of course, observed the size at the butt, and selected the largest poles in making their purchases. These poles were used to carry light lines, where much smaller poles would have answered the purpose. The larger poles might easily have been reserved for use when it was found necessary to increase the load. It was only a matter of time when the dealers awoke to the fact that indiscriminate selections by users must be stopped. This led to the classification of poles on a different basis. A series of tables were formulated showing the different dimensions of poles under classes denominated as AA, A, B, C, etc. The measurements were based upon the circumference of the pole six feet from the butt. A minimum circumference measurement at the top was also shown.

The classification of poles corresponded with the classification of lines in general, the latter being based upon the load, or number of wires the line was to carry.

Length of poles was also graduated upon the present five foot basis, where previously two and one-half and in some cases even one and one-half foot graduation was considered.

Many extravagances were practiced. The builders had not perfected their art to secure economy. So much attention was given to the size of a pole at the top that those falling below the minimum were cut off before being set, to meet the requirements. This was only one small item. Another of greater importance was the practice of grading lines. The drop between adjacent poles was limited not to exceed two and one-half feet. Foremen sometimes resorted to grading on a one foot basis. This practice required an unlimited number of long poles. It has been found in practice that a drop of five feet between adjacent poles is not detrimental to the stability of the line.

Testing That Hurt More than It Helped.

The original methods of inspecting poles for replacement when it became evident a line was weak on account of natural deterioration, were crude and lacking in uniformity. The responsibility of judging which poles had outlived their usefulness was placed upon linemen or inspectors. These men were left to their own devices as to how to determine the value of a pole.

The most general practice followed by these men was to climb each pole where size and appearance indicated a weakness, and swing it from side to side in the line. If it stood this test without breaking it goes without saying that it was considered good. If it broke under the strain it was marked for replacement. The evil results of this method soon became manifest. A two-hundred pound lineman would break more poles than one who could boast of being only in the lightweight class. An industrious lineman, either large or small, would break more poles than one inclined to take life easy. All poles tested in this manner and found equal to the strain were left loose in the ground, and no thought was given to re-tamping. Those broken were left hanging in the line. Before the test they were at least self supporting.

There was a noticeable damage to the line wires. Being set in motion by the swinging of the poles they were frequently "burned" at the ties.

Other linemen resorted to the pike-pole method. They made their tests by pushing the poles from side to side with a pike. The results were about the same as under the first plan.

The impracticability of this plan becoming evident, another was devised. The size of the poles was now given consideration for the first time. Examination was made of the condition of the pole below the ground line by means of a steel bar. The bar adopted for the purpose was about three feet in length and three-quarters of an inch in diameter, tapering to a point at one end. It was a formidable weapon with which to attack a pole. The diameter of the pole was measured with calipers designed for the especial purpose. Armed with these tools the lineman was sent out to make investigations. In the hands of a strong lineman the use of the steel bar could result in nothing but damage. He could easily drive its sharp point into a sound pole, below the ground line so far that a wrenching process was necessary to remove it. If a pole was found to be sound on one side an attack was made from another direction. If after several attempts no decayed spots was discovered it was considered to be in class A. Yet the abrasions made by the bar left it in bad condition, and rapid decay would set in at once in the pockets formed by this method of procedure.

A considerable number of white cedar poles have what is known as a hollow heart. The bar test was exceedingly damaging to poles thus afflicted to any great extent. It would be driven completely through a sound shell of reasonable thickness, not in one but in several places. A pole having considerable strength before the test would be left splintered and shattered at several points below the ground line. If a pole was affected by a weather crack or check the bar was used as effectively as a burglar's jimmy.

Diameters of all poles condemned were taken, but it was found that the measurements were so inaccurate as to be of very little value after the bar had been used. This was also due to the fact that the calipers would not stand the careless handling to which they were subjected. After a few days' use they would lose all relation to their original adjustment.

I cannot vouch for the story, though I have heard it repeated by men who have spent years in the service of the largest pole using companies, that tests were made in the following manner. A rope was attached to a pole a certain distance from the ground line and a pull made with a team. This has the earmarks of fiction as it does not appear plausible that such a dangerous method would be resorted to. It possibly grew out of experiments being made by the use of a rope in some manner, as a means of leverage.

Later Testing Methods.

In 1907 a very large company conducted a series of experimental tests, elaborate in detail, the object being to decide upon some uniform, efficient and economical method of making periodical pole tests. A tabulated list of the condition of each and every pole was made. Every defect was noted and described minutely, from the top to a point about a foot below the ground line; each pole being carefully dug around for this purpose. The rotted wood was removed from the butt of the pole with a hunter's ax. Streaks, pockets, knots, etc., were probed with a sharp pointed steel prod, about sixteen inches

in length and three-eighths of an inch in diameter. By careful use of these tools little if any damage resulted in making the necessary investigations. Two circumferences of a pole were taken; one above and one at the smallest point below the ground line. From this the deterioration could be readily seen. Poles were condemned in accordance with the amount of decay which was proportioned to the original size of the pole as shown by the measurement above the ground line. Bird holes were noted, measured, and their location from the bottom or top of the pole shown. The circumference of the pole and the thickness of the shell was also given where openings were found.

Hollow heart was located by sounding the pole with the ax, and the thickness of shell by boring carefully with a small auger. The holes thus made were plugged with creosoted plugs.

In addition to the above other observations were noted: The nature of the soil; direction of line; direction of prevailing storms; natural protection, if any, from storms; number of cross-arms; number, kind and location of wires; probable maximum load; number, kind and location of guys; date pole was set when possible.

From these data poles were divided into three classes: 1 2 and 3. No. 1 was considered satisfactory; No. 2 required attention within a certain specified time, and No. 3 required replacement at once. From these data a specification for the general inspection of poles was made up. Some of the details were omitted. The matter of classifying the poles rested upon the judgment of the inspector. He was to give consideration to protection, etc., even though the measurements fell below the minimum given in the specification. Poles larger than required by the specifications could also be set down for replacement on account of exposure, length of span or condition of the sound wood. Frequently sound wood loses its tenacity and becomes either spongy or brittle. This is easily determined. It was found necessary to form a compromise between the department making the inspection and the engineering department, which must approve the work, upon a considerable number of poles thus inspected.

Careful attention was given to the cost of this work which varied from eight to sixteen cents a pole in different sections.

In 1909 "Specifications for Inspections of Poles, Stubs and Braces" were further modified.

Definite tabulated figures as to the allowable amount of sound wood at the ground line were furnished by the engineers. With a certain load, a definite circumference was required at the ground line, after deducting pockets, for which a table was furnished, showing the inches to be deducted from circumference measurement for defects of various possible dimensions. A definite thickness of shell was given in cases of hollow heart. The judgment of the inspectors was set aside entirely. This no doubt was due to the wide differences in their opinions as to what constituted protection, etc.

Danger from Woodpeckers Not Over-Serious.

Defects in a pole above the ground were given less attention. It was found that bird holes must be extremely bad to affect the strength of a pole sufficiently to warrant its replacement. A section of five miles of line inspected in 1908 was broken down by sleet in the winter of 1909. Replacements had not been made on this section, though poles were on the ground for the purpose. This section contained a fair average of bird eaten poles but it was found that only two or three were broken on account of weakness caused by the industrious woodpecker, and these, with one exception, broke from the fall, having first broken at the ground line.

It seems advisable to omit grading poles standing in the line, further than to decide whether there is strength sufficient to give reasonable assurance that at least two years' life remains for those not condemned. From data thus far collected a general investigation of conditions of poles below the ground line is not required until six years after the date of construction, unless the poles are exceptionally small; but inspections should be made every two years thereafter.

It goes without saying that where sufficient clearance can be secured it is an economical practice to drop condemned poles into the ground instead of making a replacement. Another economical practice is that of reinforcement. This method was first resorted to by the telegraph companies. It consists of setting a stub ten to twelve feet long beside the old pole and bolting and lashing the portion above the ground to the original pole. Pieces of old poles may be used for this purpose provided the wood is sound. Creosoted stubs of southern pine and cedar are also used.

The stub and pole are bolted together with cross-arm bolts just above the ground line, and six inches below the top of the stub. At the same points lashings of galvanized iron wire are drawn tightly around both pole and stub, and stapled to each. For additional strength the lashings may be made taut by the use of a through bolt inserted between the lashings and between the pole and stub. Two small iron I-beams used as saddles between the stub and pole add to the rigidity of the construction. In telephone practice this method of construction is not practicable in cities and towns or where unsightliness is to be avoided.

There are also other possibilites for the exercise of economy in making pole replacements. Assume that a certain 25-ft. pole is rotted off at the ground. Owing to obstructions it cannot be lowered. In all probability within a reasonable distance there will be found an opportunity to use a short pole. It will be found economical to exchange or "juggle" poles at this point.

Avoid Perforations at Ground Line.

In handling poles care should be exercised in the use of the cant hook or bar. Noticeable damage results if punctures are made by these tools at or near the ground line. A majority of the cases of pocket rot may be attributed to this cause.

Ants and worms often attack poles and weaken them, also causing them to rot more rapidly than otherwise. Insects will attack an old pole more frequently than a new one. As a counter irritant it is not a bad plan to apply creosote to an old pole at the ground line before resetting or dropping it for its second period of service.

Even if the inspector is given definite rules and figures by which to be governed, so that if his measurements are accurately made there can be no doubt as to whether a pole should be condemned or not, there is yet an opportunity for the exercise of his judgment in matters which will be of assistance to those making up estimates. The notes and data submitted by the inspector must be the groundwork upon which estimates are based. The estimator knows that under ordinary conditions a certain number of men can replace a certain number of poles. Any information at variance with general satisfactory conditions should be furnished him. For instance, a sidewalk may have been laid around a certain pole, new cross-arms may be required at another place; anchors at another pole may have been washed out and should be reset and additional guy wire required for this work.

At another point a longer pole may be required on account of road grading; instances of where the condition of a pole condemned may be used for a stub or brace with economy should be noted; possibilities of improving conditions by making the replacement a few feet backward or forward in the line are not infrequent.

Of course the expense of any special work that may be done by a replacement gang should be charged under a different account or estimate. This can easily be arranged; if the

estimator has all the necessary information at hand. If an inspector is a practical construction man he can observe many things pertinent to the improvement of a line in connection with pole replacement work.

The number of condemned poles per mile to warrant a general replacement may vary. It is dependent upon the condition of the poles condemned. Two poles to the mile rotted entirely off, and even one, might spell serious disaster. There is an element of chance in connection with weak poles. Extensive breaks can in most cases be attributed to one or more weak poles. It is not always possible to locate the starting point of a break. Whether or not there is evidence to determine whether the break was due to a certain weak pole, it is evident that this pole afforded little resistance when subjected to the strain, and besides added materially to the strain upon the adjacent poles.

Long straight sections merit replacements upon a less number of condemnations than do sections where corners are frequent.

Therefore it cannot be definitely said that replacements should be made upon finding a certain number of bad or useless poles. Any action taken in matters of this nature should be given general consideration.

Bell Consolidation Service—a Story Reprinted from the Des Moines Register and Leader of Oct. 24, 1910.

Ding's cartoon in Sunday's Register and Leader, in which he pictured the antics of the telephone, struck a responsive chord. Now that he has started the ball a-rolling let us all commence to unwind our telephone yarns, and perhaps we can have just a little better service. When the company asked its patrons to have patience while they were consolidating, I am sure the majority of us sat like dumb statues, gritted our teeth, clenched our fists, stared at our telephones when they refused to talk, but said not a word. Surely they have had ample time to make the necessary changes and put their house in order, and we are again entitled to some equivalent for the money we pay them.

Preface.

The city of Des Moines has within its borders a Smith's laundry, whose telephone and mine are affinities. They are not responsible for this condition. They did not seek it. It was thrust upon them. They get their wires crossed and entangled, in fact seem to be so completely wrapped up that you can not get one without the other. This laundry has among its patrons a number of traveling men who commence to roll into the city after their week's pilgrimage on the road, any time from Friday night until Sunday morning. And they all want their fresh linen, which seems to have been sidetracked.

Chapter I.—The Way of a Telephone.

He has promised to call us up as soon as he arrives in the city, about 8 p. m. We have assured him we would be at home to receive his message. We seat ourself with book in hand. It's something like waiting at the church, only it's the telephone instead of the man this time that leaves you in the lurch. Promptly at 8 p. m. the bell rings. We take down the receiver only to have central say, "There's no one for you, lady." We have hardly had time to reach our chair when the bell rings again with the same reply from central, "There's no one calling you, lady." Not daring to dispute one so high in authority we reluctantly hang up the receiver, feeling confident he was there.

Chapter II.—The Way of a Man.

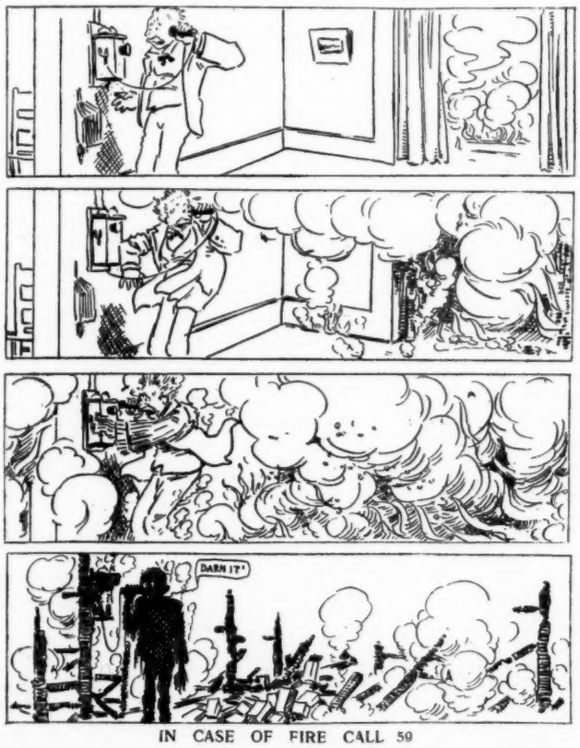
We again take up our book and begin to read, and just as Fitzgerald is about to ask Gwendolin if her attitude towards him would change if circumstances over which he had no control reduced his income to a paltry million a year, the bell clangs like a fire alarm. We hasten to the 'phone only to hear some one say, "Why haven't you delivered my laundry? I must have my shirts tonight, and you've been putting so much starch in my negligees that I have to pry the pleats apart with a crowbar. My collars are as rough on the edge as a saw, and you only sent one of my purple silk hose home last week. Oh, beg pardon, I thought this was Smith's laundry."

Chapter III.—The Way of a Woman.

We resume our reading, and after finding out that money cuts no ice with Gwendolin, she loves Fitzgerald and will marry him in spite of his poverty, we decide to go to bed. We have only had time to put out the lights and get comfortably settled, when the telephone begins to shriek as though it was in great distress. We bound out of bed, and after stumbling over chairs, and stumping our toes in the dark, manage to reach the telephone and place the receiver to our ear. A very indignant woman says, "Why don't you send home my husband's pajamas? You've had them for a week. Oh! I'm sorry I disturbed you; I asked for Smith's laundry." We go back to bed in utter disgust.

Chapter IV.—Awakening of 7956-K Mutual.

We are up bright and early Sunday morning, and attack the telephone with renewed vigor, but there is no response from



IN CASE OF FIRE CALL 59

A Horrible Example of Consolidation Service, as Seen by a Des Moines Cartoonist.

central. No thrill of life; it seems dead as a door nail. We call in the doctor, who pronounces it a genuine case of infantile paralysis; says it may linger a while to torment us with its presence and uselessness, but it will never speak again. While we are discussing its premature decay, a hissing, spluttering sound is heard, as of a teakettle boiling over on a red hot stove. We make haste to take down the receiver, and in its return to life one would have thought a bedlam had broken loose.

The doctor, much chagrined over his failure to diagnose the case correctly, declares that circumstances now warrant him in naming it either premeditated cussedness or central paralysis, both diseases being common to the telephone family.

In conclusion, would say, that this narrative is not fiction, but history, which has been repeating itself for a number of months.

Joetta Haines Combs.

Legal Questions and Decisions

Conducted by A. H. McMillan

City's Right to Regulate Rates Beyond Its Limits.

Please answer through your paper the following question: If a franchise be sold in Kentucky with one of its provisions reading as follows: "The purchaser, his successors and assigns, shall furnish the persons outside of the city and within the county, telephone service at a rate not to exceed $1.00 per month, and shall not place more than 8 telephones on a line," is the purchaser bound to carry out this section of the franchise? In other words, can the city regulate service and charges in that part of the territory that is beyond its limits?

Can you cite us any cases that have been decided along this line?

A city has no right to regulate telephone rates beyond its limits. The regulation of rates is the regulation of a business and the settled rule of law is that municipal regulations cannot be applied to an occupation, employment or business not carried on within the municipal boundaries. 28 Cyc., 722; Bates vs. Mobile, 46 Ala., 158; Gunn vs. Macon, 84 Ga., 365; 10 S. E., 972.

These cases do not involve telephone or telegraph companies, but we believe the principle should apply to them. It might well be argued that a telephone company, having its office in the city, was transacting business within the city limits when it furnished telephone service to a person living beyond its territorial jurisdiction, and that it was to the city's interest that such regulation should be exercised. This view might, of course, prevail in the courts.

Assumption of Company's Debt by Stockholders.

One Barber accepted an option on the stock and property of the Maysville telephone company of Maysville Kentucky, the option being signed by the stockholders. The option provided that, to the extent that the signers should receive from Barber cash on account of the stock and bonds sold him, they would assume the primary obligation upon any indebtedness of the telephone company and hold it harmless against such indebtedness. They were to receive $21,000 in cash, that being the amount of a debt they had against the company for moneys spent in its behalf, over and above its capitalization. The new company organized by Barber failed and so did Barber himself. Action was brought against the Maysville telephone company to enforce the indebtedness. The company defended on the ground that the indebtedness had been assumed by the stockholders and that the contract did not express the understanding and asked for its reformation. The court held that the stockholders did not become liable in such a way as to release the telephone company, and the application for reformation of the contract denied. Maysville Tel. Co. vs. Bank of Maysville, 130 S. W., 820.

Exclusive Toll Contract.

A contract between two telephone companies for exclusive toll business, with covenants that neither will enter into the other's territory, made to establish a competitive long distance telephone system in the localities reached and essential to the existence of the system, has been held not to be invalid as in restraint of trade where the restraints are only incidental, though one of the companies may not be compelled at the suit of the other to comply with the contract in violation of its duty to give the public the best, most convenient and least expensive service available. This ruling was made in an action brought by the North Manchester Telephone Company, of North Manchester, Ind., against the Home Telephone Company, of Wabash, Ind. The exclusive feature of the toll contract was shown to be made for the purpose of enabling the two companies involved to compete with the Central Union Telephone Company of Indiana. The Home Telephone Company, after the making of the contract, sent messengers over the lines of the Central Union Company to patrons of the North Manchester Company, thereby compelling such patrons to go to public stations and pay messengers. This act was held to be not only a violation of the agreement with the North Manchester Company, but also a wrong to the public, and the decree of the circuit court for Delaware County, enjoining the Home Telephone Company from violating its contract so far as such violation was a wrong to the public, was confirmed by the appellate court of the state. The court said:

"It is found by the court, and undenied, that appellee (the North Manchester company) expended a large sum of money upon the faith of the contract; that at the time it was entered into such a contract was deemed necessary to the existence of both parties, and to enable them to engage in competition with a wealthy and aggressive adversary—all cogent reasons as we have seen for upholding it at least in so far as it does not infringe upon the rights of the public." Home Tel. Co. vs. No. Manchester Co., 92 N. E., 558.

Company May Require Deposits and Payment in Advance by Subscribers.

It is the opinion of the city attorney of Portland, Oregon, that a telephone company, unless expressly restricted by the council, may require payment of its rentals in advance and also may require a deposit by the subscriber to protect the company from loss by the subscriber's possible breach of contract. This expression is given in an opinion of the city attorney, which declares that the Pacific Telephone and Telegraph Company has now no right to operate its lines in Portland. He called attention to the provision of the city charter, which requires that no franchise shall be sub-let by the grantee without the consent of the council. The council never granted permission to the Pacific States Telephone and Telegraph Company to transfer its franchise to the Pacific Telephone and Telegraph Company and this is his reason for his holding. The city attorney also expresses the opinion that the city has authority to regulate telephone rates. The opinion is based upon the case of Los Angeles against the Home Telephone Co. in which the Supreme Court of the United States decided that the city could regulate telephone rates regardless of the limitation upon rates contained in the company's franchise. This case he considered applicable because the Pacific States company was limited in its rates by its original franchise.

The opinion holds that the company has failed to comply with its franchise provisions as to furnishing police and fire alarm telephone service to the city. Whether the company has really advanced its rates is left for the council to determine.

Right to Connect Private Wires to Rural Line.

A non-subscriber has no right to connect a private wire to the main line of a rural telephone company without making such payment as the directors of the company require. This was the holding of arbitrators appointed to adjust differences between the Hickory Grove Telephone Company, near Clearmont, Mo., and W. H. Hoy, who tried to connect with the company's line against the wishes of the company's directors. The company insisted upon a payment of $15. Mr. Hoy stated that he had a petition signed by a majority of the members of the company in which it was agreed that if he built his line to the main line he would not have to pay the membership fee. The decision in favor of the contention of the directors was unanimous.

An insignificant act—seemingly—is sometimes the foundation for greater achievements.

British Telephone News

British Telephone Subscribers Do Not Regard Approaching Transfer to Post Office with Delight—Investigating Telephone Complaints—Telephoning Letters and Telegrams—Progress of the New French Telephone Cables—The Railophone—Telephones in Sweden—Newest Telephone Figures from British Postmaster General

By Abercrombie

It would be idle to suggest that the telephone subscribers of this country regard the now imminent transfer of the National Telephone Co.'s service to the Post Office with anything like pleasure. A good deal of discontent can be observed, but the subscribers feel themselves to be helpless in the matter. It cannot be said that the English telephone system is bad, for in one respect it compares favorably with any system in the world, and that is in regard to the rapidity and accuracy with which the exchange staffs do their work and the almost invariable courtesy they show the subscribers.

In London the charge for connecting with any exchange is $25 per annum. The message fee is 2 cents per call to a subscriber or any exchange in London and 4 cents for each call to a subscriber or any exchange outside, but adjacent to, London. $7.50 has to be paid along with the connecting charge for 360 messages in advance. The other variety of telephone service here—the unlimited—costs $85 per annum.

The service is not nearly so complete as it ought to be. The efforts of the Post Office should be directed toward a solution of the problem of how to make it possible for every householder in this country to have a telephone in his home. We understand that this is the problem upon which the American telephone companies are at work. The party line system is in operation in this country, chiefiy in the suburbs of large towns and in country districts, the single exchange wire carrying, as a rule, two or four subscribers. In a few cases as many as ten are attached.

Subscriptions in London are reduced by 50 per cent under the party wire system, but all the same it is not popular; English people apparently do not grudge the cost of having a thing to themselves. Here the annual subscription for connecting with any exchange (except Central and City) by means of a line used by not more than two subscribers is $15. The message rate is the same as for single line subscribers, but the minimum yearly amount payable in advance for message fees by each party line subscriber is $15.

Complaints of alleged inefficiency against the present Post Office telephone service are, it is true, carefully noted by the Post Office officials, but very rarely does the Post Office admit itself to be in the wrong. With regard to small complaints it is interesting to note that the Post Office Telephone Service has devised a series of elaborate tests by means of which complaints are investigated. With regard to those subscribers who complain of their bells ringing too frequently without need, nothing is done, but complaints of inattention on the telephone are quickly investigated.

"One of the most common complaints," said a Post Office telephone official to TELEPHONY'S correspondent, "is that of failure to get a connection. Investigations by the electric test —the passing of a current down the wires—have proved by the resistance felt that in very many cases the responsibility of failure lies with the indignant subscriber himself, who often from hurry or carelessness forgets to replace the receiver on its rest. As soon as we know this we put on the 'howler,' an apparatus which makes a roaring, buzzing sound calculated to attract attention even though the receiver is disconnected.

"Where complaints are made of inattention at the exchange an official is sent to the subscriber's house. Stop-watch in hand, he will make one call after another, and if he is kept waiting more than an average number of seconds action is taken. Several other forms of test have been devised."

With regard to the housing of the new addition to the Post Office Telephone Service it is reported that room will be found for the department in the buildings which are just being vacated by the General Post Office itself. The General Post Office is transferring itself to new and more commodious buildings in another part of the city.

The minimum of 60 words hitherto fixed for British telephonic letters has been abolished. On and from November 1, where a telephonic message is transmitted to a post office for further transmission as a letter or as an express letter, each 30 words of such message (or any less number of words over and above 30 or any multiple of 30) will, for the purpose of the charge for such further transmission (but not for any other purpose), be treated as a separate letter or express letter as the case may be. The postal charge for a telephonic letter to be transmitted by ordinary post will in future be two cents for each 30 words.

The practice of accepting for transmission telegraphic messages telephoned to a dispatching office, and also of telephoning messages received instead of delivering them by hand, is in vogue in several foreign countries. In Switzerland a yearly payment of 20 francs ($4) will entitle any telephone subscriber to have his telegrams telephoned to him, and, if the message is in a foreign language, to have a written copy delivered later by hand. In Germany a charge is made for each messge telephoned, or received by telephone, of two cents in the daytime and 4 cents during the hours from 10 p. m. to 6 a. m.

In this matter the British public is far better served; our postal authorities are very anxious to extend the system of delivering telegraphic messages by telephone as far as possible, and so they willingly undertake not only to deliver messages by telephone, but also to receive them for dispatch in the same way without any extra charge. At the Central Office in London a special staff has been created for receiving telephone dictated messages. The number so sent in the year 1908-9 was 4,476,000, and the number delivered during the same period 2,000,079.

The object of the Post Office in trying to induce people to receive their telegrams over the telephone is to reduce the amount of work for which boy labor has to be employed.

As matters stand, a very large number of boys employed by the Post Office have to be discharged when they reach man's estate because they cannot be absorbed into the adult staff of the department. Thus the ranks of unskilled and unemployed labor are constantly and largely recruited—a fact which has aroused strong and well-founded protests in many quarters. The postal authorities are very keenly desirous of meeting the wishes of their critics and of putting an end to a system which they frankly recognize to be bad; but to be successful they want the assistance of the public. The public must agree to dispense with the telegraph messenger, and receive, as far as possible, its telegrams through the medium of the telephone. As the figures given above show, the public does not respond with any alacrity to the pressing invitation of the Post Office in this matter. The facility for dispatching a message by telephone is often a great convenience, and people take advantage of it, but receiving a message in the same way means a little

trouble, and so the scandal of the messenger boys is allowed to continue.

The progress of the new telephone lines which are now in construction between London and Paris is being watched with interest. There are already four telephone lines to Paris and one between London and Lille. Four additional lines between London and Paris are in progress of construction. These extra lines necessitate the provision of two new cables, one of which is already down. It will not, however, be brought into use for some time, the exact date depending upon the completion of the land lines by the British and French Governments. It is anticipated that it is possible to extend the limits of the user of the London-Paris telephone but the length of extension has not yet been determined nor will it be until several more elaborate experiments have been carried out.

The British Post Office Telephone Service will avoid giving a service between two places so far apart as to render the communication of little or no commercial value. Communication may now be had between Paris in France and Manchester and Liverpool in England, but those are the most northerly towns in this country to which the Paris service extends. In future it is hoped that Paris will be put on speaking terms with Edinburgh and Glasgow in Scotland. As I have before mentioned, the present charge for the use of the telephone between the English and French capitals is $2 per three minutes, no reduction being foreshadowed until the four new lines are completed and in working order. The amount of the deduction then will depend upon the terms of the convention which is to be arranged between the two countries.

Since I recorded the successful demonstration of the system of wireless telephoning of and from trains in motion back in the summer, matters have moved on rapidly. A syndicate is being formed to develop commercially the invention. The invention has been installed as a permanent feature on a well-known Southern express train and as to its advantages it is pointed out that the system would be invaluable in the prevention of dislocation of traffic by fogs.

Amongst the directors of the financial syndicate who are taking up the so-called "Railophone," is Ernest L. Walford, a well-known stock exchange broker specializing in railway securities. The chief business of the syndicate will be to secure patent rights abroad and to grant licenses for the use of the system by railway companies.

The British Government figures showing the total revenue for the quarter ended September 30 last show an increase of $450,000 in the telephone service revenue for the three months.

Sweden has always been a pioneer in the matter of telephones, in their use and their manufacture, and also as regards State and private services. Ever since the Swedish State telephone commenced operations, in the year 1887, there has been a continuous increase in the turnover, and last year's number of telephone conversations at the State telegraph stations amounted to 322,288,450, the receipts amounting to 11,042,351 kr., against 10,220,575 kr. the previous year. The State telephones had, at the beginning of the present year, 118,949 telephones in use. The length of telegraph lines at the end of last year amounted to 32,083 km., the length of interurban lines to 60,430 km., and that of connecting and subscribers' lines, respectively, to 51,213 km. and 127,463 km. The large Stockholm Telephone Co. on the first half-year of 1910 had an increase of 1,639 subscribers, which is a record figure, and the Swedish telephone companies in Moscow, Warsaw, and Mexico are all doing exceedingly well, new central offices having been necessary in the two former places. At Moscow, Warsaw, and Mexico the common (Bell) battery system has been adopted, and a similar reform is under contemplation in Stockholm. The two Russian companies have the sole concession for telephones in their respective cities, with environs, while the one in Mexico has an American competitor, but they are all doing well and the increase in subscribers is very rapid and striking.

The annual report just published by the Postmaster General shows that the telephone revenue of the past postal year is $8,559,835, an increase of $915,060, and the telephone expenditure, after making provision for the annuity payment in repayment of the capital expenditure, was $8,919,700, an increase of $1,044,725 upon the previous year. The net deficiency was thus $359,865 or $129,665 more than last year. These figures may possibly bear some explanation, but on the face of them do not encourage high hopes for the lucrative results of the coming transfer to the State. That this branch of Post Office work is assuming greater and greater magnitude, the undernoted particulars will sufficiently indicate:

	1909-10.	Increase.
Trunk line exchanges	643	45
Trunk circuits	2,666	140
Capital expenditure to end of year	$27,983,780	$4,569,800
Conversations over inland lines	26,566,318	3,064,294
Average payment	11.98c	0.26c
Gross revenue from inland calls	$3,314,225	$444,810
Receipts from Continental calls	$120,675	$10,050

New exchanges opened, 127.
New trunk call offices, 62.

Big Increase in the Omaha Independent Exchange During October.

The progress of the Omaha Independent Telephone Co. is of intense interest to the large number of subscribers of the great Independent System of Nebraska, as well as to the management of the separate Independent properties which, through interconnection contracts of a special type, have formed this system into a comprehensive operating unit for a period of 25 years.

The latest number of "The Automatic," a booklet issued to keep subscribers posted on the progress made by the Independent Telephone Co., of Omaha, contained ten and one-half pages of new names added to the subscriber's list during the month of October. There was a total gain of 550.

"The Automatic," issued under the supervision of Receiver Lysle I. Abbott, contains a page and a half of interesting reading matter which makes people watch for the appearance of this booklet early each month.

An item which could be used to advantage in other exchanges appears as follows, under the head, "Are you It?"

Do you turn to your office boy or stenographer and say, get Mr. Jones for me? When the connection is put up and Jones is on the wire and has been told to wait a minute do you finish your letter and then turn leisurely to your desk telephone and take up the matter in hand—*your business?* If you do you are a *boor,* and the only thing that saves the beauty of your starry eyes is the telephone—and the fact that Jones is such a slave to new conditions that he does not openly resent the *insult.*

Change the stage setting—have your office boy go to Jones' office and tell him to turn his back on his customer, drop his business, and stare at the ceiling until you get ready to talk to him on *your business.* If Jones was worthy to bear that ancient and honorable name, your business would be with a surgeon. Am I right? Then if you do it, don't do it.

The current number of "The Automatic" says that over 300 persons in Omaha and vicinity are financially interested as bondholders in the Independent property. A new extension on a street in South Omaha has been built and the company expected, at the time "The Automatic" was printed, that in a few days there would be a hundred telephones working in this new district.

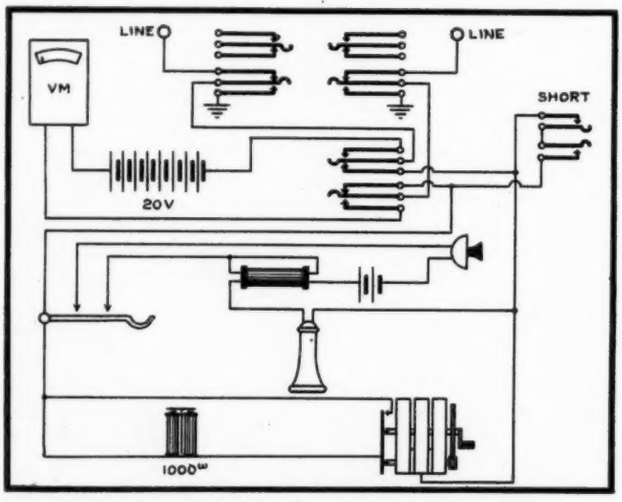
Experiences of the Workers

A New Testing Outfit for a Small Exchange.

As I see a great many descriptions and inquiries in TELEPHONY relative to testing equipment, I am sending you a print and description of a circuit we are using in two small magneto exchanges, and which proved entirely satisfactory.

The single throw key in its normal position connects the talking and ringing apparatus with the line. Changing the position of this key connects the voltmeters and battery in series with the line. In this way the resistance of the loop can be measured.

The double throw switch in its normal position connects the apparatus to the line metallic. This key enables the operator to make tests from either side of the line to ground. The push button key marked "short" is used to measure the voltage of the battery. It will be noticed that the generator shown is arranged to short-circuit the buzzer while ringing, thereby giving the full output of the generator to the line. This is useful in ringing on a crossed or grounded line just before making the voltmeter test. This usually makes a cross or ground more solid—that is, it tends to burn away rust or corrosion on the wires that would show considerable resistance on the voltmeter otherwise. We use for this class of work a cheap low resistance meter of the ——— type. We work out a resistance table and then maintain the



Simple Key Outfit to Test for Grounds and Crosses.

voltage of the battery as near the original point as possible.

This apparatus is all mounted in and on a compact telephone cabinet.

Trouble Shooter.

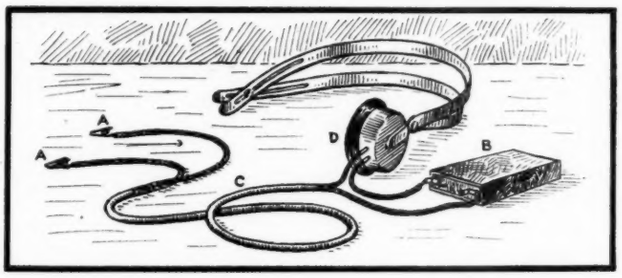
A Help for the Service Inspector.

One of the principal duties that confronts the service inspector is to visit the largest possible number of subscribers in such a way that the operators will not know that there is a test being made.

Naturally, the inspector goes through the main business streets and the thickly populated residence districts. The operators soon learn the routes and numbers most frequently tested. When they discover that the inspector is making a test, they watch the numbers from which he usually calls.

It is not an infrequent occurrence while working at the switchboard to hear an operator say to her companion "He'll call from there next." "What'd I tell you!" "Got a good one that time," she remarks a few minutes later with a triumphant smile; yet some other subscriber may be flashing and grumbling about the poor service.

The manager smiles the next day, when he looks over the



Hand Outfit for Making Observations at Subscribers' Stations.

good report and cannot see why the subscribers are complaining of poor service.

Studying over some plan of helping the inspector to make a report that clearly indicates the service conditions, the following suggested itself, so it was tried out:

A is a pair of clips; *B* is a small condenser such as used in desk stands; *C* is a two conductor cord split back for a foot or eighteen inches so the clips can readily be attached to the line binding posts of the instrument; *D* is an operator's receiver. All are connected in series. The condenser and receiver can be bound together and all carried in the coat pocket. In common battery exchanges the condenser prevents throwing the line lamp or relay; in magneto systems it allows the subscriber to give the operator a disconnect signal on the ring-off drop.

By attaching the clips to the line binding posts and having the subscriber call for the number, the operator does not know that an inspection is being made.

There may be a few minutes more a day required to make the test of a given number of subscribers, but the report that the manager receives next morning will show the working condition of the service.

The inspector then knows how the operators speak to the subscribers, besides making his test of time to answer, answering on flash, "Ring 'em again," "Don't answer," "Telephone has been taken out," or any other tests that he may desire to make.

JAY W. HACHE.

Queen and Crescent Route Install Telephone Dispatching on Important Branch.

The Queen and Crescent route, with headquarters at Cincinnati, Ohio, quite recently supplanted telegraph dispatching with telephone dispatching along one of the most important sections of its road, from Cincinnati, Ohio, to Chattanooga, Tenn., The traffic over the Cincinnati and Chattanooga section is very heavy, 55 miles of the line being double track. One of the officials of the Q. & C. route paid a high tribute to the efficiency of telephone dispatching when he said that the modern system had been installed by the Queen and Crescent in deference to its policy of bringing its lines to the highest possible excellence.

Discrimination Charged Against Bell Co. in York County, Nebraska.

The Bradshaw Telephone Co., has lodged with the Nebraska Railroad Commission a complaint charging that the Bell company is gving free service to persons named in York county to persons named in the complaint.

Answers to Practical Questions

Subscribers may submit for answer in this department any questions on practical telephone topics, such as construction, circuits, electrical theory, troubles, operating, traffice, costs, records, business, methods etc.

The answer to each question will be burnished by a man recognized as an expert in that particular branch. In case the answer cannot be published it will be forwarded by mail. No charge is made for this service, and subscribers are encouraged to consult us freely and freuently.

In every case a thoroughly complete description of local conditions is required to insure a satisfactory answer.

Magneto Exchange Testing.

Please publish the best and most practical testing circuit for a small magneto exchange. Also the scale and resistance of voltmeter to be operated on dry cells, economy considered.

A Subscriber.

There is published this week an article giving a practical testing circuit for a small exchange. We would suggest that you look over our files for several months back, as many articles have been published and it would be well for you to select the circuit which gives just what your switchboard and line conditions need. We would suggest particularly that you look back over issues in the Spring as there were several good articles published then.

As to the correct type of instrument to use, write to our advertisers of voltmeters and also ohmmeters and get their literature. If you are still in doubt on any points after reading up this matter, ask us specific questions covering the points about which you are in doubt and we shall be glad to answer them.

Always sign your name to correspondence, Mr. Subscriber, so we can reply by mail if desirable. Thank you for recommending that your friends subscribe to TELEPHONY.

Ammeter Cannot Be Used as Voltmeter.

I have a 100-ampere D. C. Whitney Electrical Instrument Co. ammeter that I would like to change to a voltmeter or be able to measure trouble with it in some way. It measures 100 amperes with the shunt but without, it seems to measure some fraction les than one ampere. Would appreciate any information furnished.

The ammeter mentioned cannot be made into a voltmeter for use as a ground detector without changing the complete moving element of the instrument proper. The expense of this work would be so great that it will be better to purchase other apparatus for the purpose in mind.

Polarized Vibrating Bell.

What is the difference between an ordinary vibrating bell and a polarized bell?

The difference between an ordinary vibrating bell and a polarized vibrating bell lies wholly in the fact that the one is neutral and the other polarized. That is a permanent magnet is so placed on the field magnet of the latter that a current flowing through it in one direction only tends to neutralize its permanent magnetism, and does not attract the armature. A current in the other direction adds its pull to that of the permanent magnet, and so operates the armature, which then alternately breaks and makes its own current just like an ordinary vibrating bell.

Carbons Cannot Be Re-Used in Dry Batteries.

Why is it that makers of dry batteries do not use the carbon portion of worn out batteries a second time? The carbon loses nothing in the chemical reaction, and theoretically could be used any number of times, it would seem. Considerable value is wasted by throwing the carbons of old cells away, is there not?

The carbon element of a dry battery which has been used becomes impregnated with the chemicals which are introduced into the battery and when the moisture in the battery has become exhausted this impregnation takes on a crystal formation. These crystals are insoluble, and the electrodes if used again in new cells fail to perform their functions as a collector. The same is true of the carbon mixture; the chemicals permeate the mixture and make it absolutely useless for the manufacture of new cells, because the crystal formation will not dissolve.

(1) Write to the People Who Advertise Them in TELEPHONY—and (2) Read TELEPHONY.

(1) Will you please advise me what I ought to get in the way of a voltmeter or ohmmeter for locating trouble in a 100-line magneto exchange (metallic bridged system). See your comment on Mr. Totten's "piece" in TELEPHONY, Oct. 22, 1910, page 495. Such instruments I do not yet know much about, but I wish to learn. (2) Will you also advise me how I may learn to use it?

Bridging and Series Telephones on the Same Line.

Wishing to connect a bridging and a series telephone on one line, with central office between, (magneto board, grounded lines) I find they won't work satisfactorily. . See Fig. 1.

The location of the telephones cannot be changed, and it is not desired to use any additional line wire. Explain the trouble, and if they can be made to work in this position please give wiring diagram, together with easiest and least expensive way to do it. If both telephones, A and B, were 80-ohm series, would they work right?

It is rarely advisable to work bridging and series telephones on the same line. The only way to get satisfaction and reliable service is to make both of them bridging, as well as the switchboard drop. However, if you must use the series telephone give it as high a resistance as possible, by removing the generator shunt. This will leave the hand generator armature permanently in series with the 80 ohm bell and raise the resistance to 300 or 400 ohms. Since the switchboard is between stations *A* and *B* (Fig. 1) the drop should be about 500 ohms resistance and bridged to earth as shown. The jack must be arranged to cut off the drop by opening its circuit, or leave it permanently bridged. A series jack which cuts out the drop by short circuiting it with a long tipped plug will not do, for when a short plug is used the 500 ohm coil will be left in series and will cut down the talking current. The condition shown demands a bridging line and series telephones are out of place.

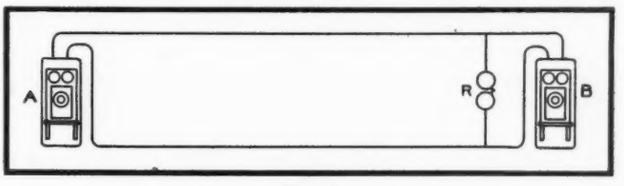


Fig. 1.

Impedance of Condensers in Multiple.

If a 2 M. F. condenser offers a certain resistance to a ringing current, would 5 condensers in multiple offer 1-5 as much?

Five condensers of 2 microfarads each in multiple have a capacity of 10 microfarads. The resistance or impedance of this combination is approximately one-fifth that of a 2 microfarad condenser, i. e., 1,600 ohms to a current of 10 cycles. This resistance is increased somewhat by absorption in commercial condensers.

The Paducah Convention

Western Kentucky Association's Meeting—Bell Jackals Kept Out of Banquet Hall—The Right Spirit

By J. C. Kelsey

The convention of the Western Kentucky Association was held at Paducah, November 15.

One hundred delegates were present and some very interesting speeches were made.

There were the usual Bell jackals hanging around the convention. However, they were not admitted to the floor.

Telephone matters in Kentucky are very acute.

The Cumberland telephone concern has been so busy defending its alleged divine rights that it has resorted to almost every satanic trick to defeat competition.

Naturally, there is no great love for the Octopus, nor any desire for interconnection.

The spirit of this meeting was "Kentucky for Kentuckians."

Getting back to the States' rights idea.

Having Louisville, Lexington, Frankfort and all strategic points, no possible need exists for alleged universal connection.

E. M. Coleman of Louisville, called the meeting to order.

Mr. T. B. Latta, of Clinton, Ky., welcomed the visitors.

While Mr. Latta tried to convince the convention that he was no speaker, but a farmer, he certainly made a talk which, while extemporaneous, was worth while.

Mr. E. M. Coleman, in his characteristic fashion, brought out the need of the hour for co-operation.

That this year was the time to unify all forces, or never.

That telephone people were facing a crisis.

He did not agree with the National Association forces on the question ol interconnection.

J. C. Kelsey followed, discussing "Co-operation vs. Universal Connection."

Mr. Sam Fletcher, of Crutchfield, also proved himself an orator, while discussing "Equipment."

Once he wanted to buy Bell equipment but they would not sell.

When they wanted to sell, superior makes had appeared on the market, and he would not buy.

John M. Moore, of La Center, made a magnificent speech.

He spoke of true independence—believing in it, practicing it.

The greatest good to the greatest number of people.

He said the Bell properties in his neighborhood had changed name so often that at the moment he could not be sure of naming them.

When he went after a franchise, the Bell folks tried to tell him that trained experts alone could succeed.

Further, that the Bell company was like the post-office, it lost lots of money but never minded it, because it loved to serve the people.

Mr. Griffitts told of what Independent manufacturers had accomplished.

How he had been trained as a Bell man and thought that Independent devices would not work.

Really, some one should send missionaries to benighted Bell employes, unless recent years have enlightened them.

J. W. Edwards, of Hopkinsville, spoke on "Construction," calling attention particularly to right-of-way which would stand the legal test.

Stodder from Cooks, told of Quebec construction matters, and necessity of permanent building.

Adjournment was taken for lunch and "Seeing Paducah" in a street car was indulged in.

W. B. Stanfield, of Mayfield, told of early struggles, how the Cumberland Bell had even enjoined the farmers' own highway, and showed the cost of switching for rural lines.

Mr. Moore called attention to certain legislation.

Mr. Coleman told of one Bell bill which refused the use of highways except where standard construction was put up.

This would be pretty hard on a rural company.

But it shows how Bell forces love the farmers.

Dr. Rozzell, of Mayfield, gave his impressions as president of a thriving company.

R. H. Polk, of Memphis, gave a fine talk on "Preservation," worth while to every operator and investor.

F. W. Cherry read a paper which will appear in TELEPHONY.

Officers were elected as follows:

W. B. Stanfield, of Mayfield, president.

J. M. Moore, La Center, vice-president.

C. A. Royce, Mayfield, secretary-treasurer.

Executive Committee:

T. B. Latta, Clinton.

Geo. Johnson, Kevill.

Dr. Rozzell, Mayfield.

Adjournment was taken and a banquet followed.

The Eastern Kentucky meeting will be held at Lexington, Tuesday, November 22.

Later in December, the State meeting will be held at Louisville.

Big Improvements to Be Made at Vancouver, B. C., After Talk of Competition.

A few months ago there was talk of a competing system in Vancouver, B. C., owing to alleged dissatisfaction with the service and low development of the British Columbia Telephone Co., a subsidiary of the Bell Telephone Co. Purely out of charity, as usual, an A. T. & T. representative went up there to look things over. Now comes announcement that the company will spend a half million and put in 3,000 telephones at once.

"This was not Competition, children; only the fear of it!"

In the Operating Field

Conventions; Kentucky, Lexington, Changed from Winchester, Nov. 22.

Kentucky Association Meets in Lexington, not Winchester November 22.

Since the successful convention at Paducah this week, Kentucky Independents are looking forward with enthusiasm to the convention in the Eastern part of the state next week. The meeting place has been switched from Winchester to Lexington. A strong delegation will be present and matters of vital interest to every Independent company in the state will be discussed. A strong and interested attendance is expected, and it will be worth while for managers and stockholders to let current business go for a day to attend this convention. There will be matters discussed which will show how to put business in this section on a more profitable basis.

Naturally you want to know what the other telephone company is doing. Tell the readers of TELEPHONY just what you are doing, and comtemplate. This will encourage others to send in reports.

South Dakota Convention to be Held Early in January.

The South Dakota Independent Telephone Association had a rousing good convention at the beginning of this year, but it is planned to break the record early in January, 1911. Arrangements are already under way, and the officers have taken time by the forelock, and are getting up a program that will make it worth while for every manager and investor in South Dakota properties to attend.

It is always to be borne in mind in connection with conventions that it is not especially the set program that should be looked forward to as the main feature of the meeting; the chances to meet other men who have the same problems, and to discuss methods and results are a first-class means of improving the efficiency of the work at home. It is not a bit too early for South Dakota Independents to begin to plan for this convention and figure over what will be the main things to compare notes on, and in fact to begin to get some notes down on paper, ready for comparing. It is very easy to forget some of the important things on convention dates.

Mississippi Anti-Trust Case Approaches Decision.

On October 25, at Booneville, Miss., Chancellor J. Q. Robbins heard the application for a temporary injunction to prevent the Cumberland telephone company from making discriminatory cuts in rates at Booneville and vicinity. Evidence was introduced to show that the Cumberland was givin cut-rate service at figures far below those prevailing in 69 other towns in Mississippi; that the cut rates were introduced for the purpose of destroying the business of its competitor, the Booneville company. It was contended by the plaintiff that the Cumberland company has no right to discriminate in this manner for the purpose of destroying and crushing out a competing company.

The Chancellor, after hearing evidence, announced that the case would be taken under advisement and a decision reached at an early date.

The Booneville company was represented by Hon. W. P. Shinault, of Oxford, and the Cumberland company by Hon. J. B. Harris, of Jackson.

Mississippi is thoroughly aroused in all sections where full information is at hand on this case. The telephone users of the state are opposed to monopoly and would hardly care to be at the disposal of the Cumberland company, which has with such a ruthless hand attempted to crush out competitors. But the latter, backed by local sentiment, and some of the best citizens and ablest business men of numerous towns, built up rapidly growing Independent systems in the communities where they operate, and seem thoroughly able to hold their own against the foreign legions of the Cumberland and give as good as is sent against them.

Mississippi Paper Resents Attack on Competition.

The character of the sentiment prevailing against the Cumberland company in quarters where the fight waged by the Independents is understood, is amply shown by, for example, the following comment from the Booneville *Plain Dealer,* following a report of the progress of the anti-trust or anti-discrimination litigation:

"After reading the above it should be borne in mind that the *Plain Dealer* has consistently opposed the attempts of the Cumberland telephone company to smash out competition in Booneville and vicinity. The effort to crush competition has been in progress for a number of years. It had failed so far, but a recent illegal and vicious order of the state railroad commission gave them an alleged right to cut the rates below the rate fixed by the railroad commission for every other town in the state in the same class as Booneville. Mr. Shinault, in his argument before the Chancellor, clearly showed that the Cumberland was using unfair and illegal means to destroy competition.

"There is no doubt in this writer's mind that the order of the railroad commission is illegal and clearly indicates that they were unaware of the law in the premises or were under the influence of the Cumberland, i. e., Bell Telephone Trust Co. Mr. Foster Hume was present at the hearing. He is the same 'buck' that drew a pistol on defenseless striking Cumberland working girls at Memphis several weeks ago, an account of which you all saw in the Memphis papers of the date of the occurrence. The Bell telephone company, of which the Cumberland is a branch, is without doubt the most unscrupulous, mercenary, merciless and vicious company that has ever invaded the South."

Are you an interested reader of TELEPHONY? If you are, and are interested in the happenings among other companies, someone is interested in what you are doing. Send us the news about yourself—and co-operate with us in making our publication more "newsy."

Progress Made By Ohio Independent Company.

O. O. Welsheimer, general manager of the Stark County Telephone Co. of Canton, Ohio, reports a very active career for the company. He says that during the past six months the company has been gaining 60 subscribers per month in and around Canton. In September there was an increase of 95 new subscribers and in October 86. The company now has 5,500 telephones in and around Canton, which is a city of slightly more than 51,000 inhabitants. In that number but 150 are farmers' telephones, showing the large number of telephones in the city of Canton proper. The company has the Bell bested more than two to one and is going right along on its campaign. Recently new switchboard equipment was installed.

Whitewash Report for Colorado Bell.

Mr. Herbert George, president of local improvement societies at Denver, who claims to have made a careful research in methods of doing business of the Colorado Telephone Co. is evidently an admirer of Herbert N. Casson, the latest eulogist of the Bell telephone, and Theo-

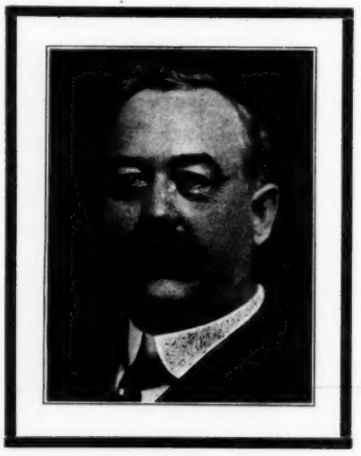
dore N. Vail. At any rate he anticipates for his report the "cheap and nasty" verdict "bought off." Casson created a wonderful phrase there and Mr. George is to be congratulated upon his reading and discrimination.

Mr. George's alleged report shows a surprising lack of knowledge of the situation, but makes a fairly interesting newspaper article for the casual reader. There is a good deal of misinformation and inaccurate information in it. It is not the type of constructive publicity which will help to get the telephone business on a firmer basis with the public, although it apparently makes a feeble attempt to plead for fair rates for telephone companies, something that every good telephone man or fair minded citizen should urge as a general proposition.

By sending TELEPHONY news pertaining to the changes, progress, development of your company you are proving a helpful factor to yourselves and to others. In this way you are making the paper a medium for boosting your own interests.

Wm. Bowen—A Good Salesman and a Sterling Independent Telephone Man.

The Iowa Independent telephone field was greatly shocked to learn of the sudden death of Mr. W. M. Bowen, state representative of the Stromberg-Carlson Telephone Manufacturing Co. during last week. Mr. Bowen was known and admired wherever Independent telephones are



William Bowen.

used in Iowa, and was the friend and enjoyed the friendship of progressive business men in all parts of the state.

Mr. Bowen was born at Fort Wayne, Ind., in 1853. In 1876 he was married at Brooklyn, N. Y., and shortly after engaged in the drug business in Santa Barbara, Cal. In the late '70's he returned to Fort Wayne and engaged in the wholesale millinery business, but sold this and took a salesman's position with the Jenny Electric Co., of Fort Wayne, later known as the Wood Electric Works. While with this company he sold equipment for the Peoria, Ill., plant in competition with the Thompson, Houston Co., and the Edison Electric Co. In 1884 he moved to Oskaloosa, Iowa, where he bought an interest in the gas and water works. He was superintendent of this plant for five years, during which time it was entirely rebuilt. In 1889 he went to Davenport and organized the Hawkeye Electric Co., building motor generators and electric street and power equipment. In December, 1900, he became associated with the Stromberg-Carlson company. While with this company he sold equipment for the principal towns in the state, such as Des Moines, Clinton, Oskaloosa, Knoxville, Red Oak, Dennison, Corning, etc.

He also furnished the state institutions with this equipment. His sales of telephones were in excess of 150,000.

Mr. Bowen was a firm believer in Independent telephony and courage, his energy and sales ability have aided the Independent telephone business to develop rapidly in the state of Iowa.

Among testimonials to his memory which have been received by TELEPHONY from some of the men who knew him best, are the following:

"The announcement of William Bowen's death came as a great shock to me, as I was not aware but what he was in the best of health.

"We will all, throughout the whole state of Iowa, miss the cheery face and open hand of 'Billy Bowen.' The traveling salesman who can fill his place is born and not made. He had the real ability to explain and the happy faculty to convince. He was possessed of a giving nature that exemplified the broad liberality of the true brotherhood of man. As a crowning feature of a well rounded character his geniality was a marked degree of his success, and made his presence always welcome in the office, at the home, on the street or anywhere.

A. G. Hawley, president Tri-City, Tel. Co., Clinton.

"The Independent telephone people have lost in the death of 'Uncle Bill' Bowen one of their best friends. He will be greatly missed among Iowa telephone men. He was a genial companion, a live wire, a good salesman, always assisting with the proper suggestions any in the operating field. He was a big-hearted, whole-souled chap, aiding greatly with his jolly good-fellowship, at all our telephone meetings, whether National, State or District. His untimely death will be regretted throughout the State where he has been so well and favorably known."

J. C. Thorne, President Jefferson County Tel. Co., Fairfield, Ia.

"We all very much regret the death of Mr. Bowen. There was no telephone man in Iowa better known and better liked by the great number of operating telephone people than was Bowen. It was always a pleasure to have a call from him, and he was always willing and glad to do anything within his power for the accommodation of the trade, whether it be for his best customers, or for an occasional purchaser.

"He was an unceasing and tireless worker for Independent telephony and the telephone situation in Iowa has been greatly benefited by his influence. I think the last trip that he made on the road was to Council Bluffs and he was feeling in pretty good spirits at that time, having recently returned from a western trip."

C. A. Laubach, general manager, Independent Nebraska-Iowa L. D. Tel. Co., Council Bluffs.

"I learned, with great sorrow of the death of our good friend, Wm. Bowen of Des Moines, the Dean of the Telephone Traveling Men in the Iowa territory. His long service with a prominent manufacturer had given him an acquaintance with all the telephone men of Iowa and large numbers without the State, and his big heart and genial nature made his acquaintances his friends. He was an active worker and a good booster and backed up his faith in Independent telephony with investments in its securities. His face and figure were familiar at all Iowa and National Independent telephone conventions, to the success of which he always contributed his full share. Many of us knew his family and our sincerest sympathy goes out to his wife, son and daughter."

Chas. C. Deering.

Good Prospect of an Anti-Trust Suit in Minnesota.

St. Paul, Minn., papers of November 10 contain prominent articles announcing that the Hon. E. H. Moulton, president of the Tri-State Telephone & Telegraph Co., has appealed to the attorney general of Minnesota to bring action, under the anti-trust laws, against the Northwestern Telephone Exchange Co. The specific charge was that it had bought the Winona Telephone Co., of which James A. Tawney, whose career as a congressman is well known, was president. After purchasing the Winona company, the Northwestern company cut out the Tri-State toll lines.

Mr. Moulton's application to the attorney general contains a strong arraignment of the trust methods of the Bell company, and recites its general policy of buying up competitors in violation of the law, particularly the recent purchase of the Western Union Telegraph Co., which was in direct competition with the A. T. & T. Co. in so far as the latter leased its wires for telegraphic purposes.

Mr. C. P. Wainman, general manager of the Northwestern, has replied to some of the allegations by Mr. Moulton by giving his personal history, which is an interesting story of advancement through the Bell ranks. The answer recites that rates of both companies in Winona were too low for profit.

A point in Mr. Wainman's paper which will undoubtedly *have a strong bearing on any contention of the Bell company in relation to physical connection* is the following sentence, relating to the notification of subscribers that business would be conducted on one of three plans, the last of which was "that they might continue the service of the Winona company and obtain such connections with the subscribers of the Northwestern company as they might desire upon the payment of *five cents for each connection*, which *was a reasonable and usual charge therefor.*"

TELEPHONY does not publish rumors. Facts only, news facts, are wanted, but every live telephone man is aware that these exist all about him. Send them to us frequently. We want all the news, quickly, concisely, accurately.

Further Action Against Chesapeake and Potomac Telephone Company.

The experts are nearing a completion of the work of gathering data for the Public Utilities Commission as a result of the numerous protests against the change of telephone rates charged by the Chesapeake and Potomac Telephone Co. in and around Baltimore. The commissioners say they will wait a few days until the telephone company issues its annual report before setting a date for another hearing in the telephone rate case. If the report is not forthcoming by December 1, the hearing will be given the protestants against the abolition of the unlimited telephone service. Many of the improvement and civic associations have engaged counsel to represent them at the next hearing.

Evidences of the manner by which the Maryland Telephone Co., which was absorbed by the Chesapeake and Potomac Telephone Co., is being put out of business by the Chesapeake company was brought to the attention of the Public Utilities Commission during the past week. One letter from 69 residents of the Baltimore and Harford roads and another from the York Telephone and Telegraph Co. cited this forcibly. When the Maryland Telephone Co. was absorbed by the Chesapeake and Potomac company it was undestood that the former was to continue and the latter was not to make any efforts to put it out of business.

The letter from the residents along the Baltimore and Harford roads notifies the utilities commission that they as subscribers of the Union Telephone Co. have received notice that the interchange contract between that company and the Maryland Telephone Co. will not be renewed upon its expiration. This is due, they claim, to the efforts of the Chesapeake company.

The York Telephone and Telegraph Co. informs the commission in its letter of a similar purpose of the Maryland company as regards that company. They are appealing to the commission to settle the question.

Real news gives a publication distinctiveness. TELEPHONY is a distinctive publication in many respects. By making it more newsy, which is possible with your help, we will increase its value to every reader. Is this point made plain to you? Send us the news for publication.

No Action Yet in Matter of Morgan Consolidation in Ohio.

Telephone men in Ohio are looking for some sort of announcement from the New York office of J. P. Morgan and Co., as to what will be done with the Morgan properties in the Buckeye State. Material men, contractors and others who have been looking toward the Morgan companies with an eye to securing contracts for betterments and extensions are still waiting, as nothing has been authorized from the New York office, and it is doubtful if anything will be done this fall.

Rumors of a gigantic consolidation of all the Morgan properties in Ohio and Indiana are still current, but as far as it has been able to be ascertained none of them can be verified. It is believed by financial men that as soon as the atmosphere is cleared of legal complications there will be some sort of a combination, but just what it will be is a matter of conjecture. It is argued that the properties in Ohio and Indiana can be better managed and with greater economy if there is a consolidation.

The United States Telephone Co., which has its real headquarters at Columbus, will be the groundwork for the consolidation if one is made. Others which will enter into the organization are the Columbus Citizens Telephone Co., of Columbus, Ohio; the Cuyahoga Telephone Co. of Cleveland; the Home Telephone Co. of Dayton, Ohio, the Toledo Home Telephone Co. of Toledo, and several in Indiana.

Nebraska Anti-Trust Suit in the Hands of a Commissioner.

The suit brought by the Attorney General of Nebraska against the Bell telephone companies and certain former Independent companies for violating the anti-trust law of the state by attempting to form an illegal combination having the effect of destroying competition, has been placed in the hands of Judge E. E. Good by the supreme court of the state.

Judge Good will act as a commissioner to take testimony and bring into the supreme court findings of fact and law having a bearing on the case.

A plan of general co-operation is the thing most desired by TELEPHONY. This includes sending us early reports of all events in the telephone world. If you "get the habit" of sending us reports of such happenings it will be profitable to all of us. You cannot fail to appreciate the importance of this truth.

Bell Telephone Society in Ohio to Celebrate.

Members of the Ohio Bell Telephone Society, which is composed of officers of the various Bell telephone companies of the state, will hold a meeting in Columbus, Ohio, Monday evening, November 21. The society was organized last spring and has a large membership. Its previous meetings have been held at the Ohio Club, but this time, owing to the large number of guests, it probably will be held at one of the hotels, where more room may be obtained.

New Inventions

By Max W. Zabel

TELEPHONE RECEIVER HOLDER.

H. M. McAlarney, Puritan, Pa., patent 974,506, Nov. 1, 1910.

A receiver holder for desk telephones consists of a bracket detachably connected to the pedestal of the desk telephone. A bar carried by this bracket is so bent as to provide a horizontal support and an angular portion in proximity to the transmitter of the telephone. Bearings are mounted upon the horizontal support of the bar and a switch rod is journaled in the bearings and adapted to control the movement of the receiver switch arm. An arm adjustably connected to the angular portion of the bar is adapted to support the receiver.

TELEPHONE DISINFECTOR.

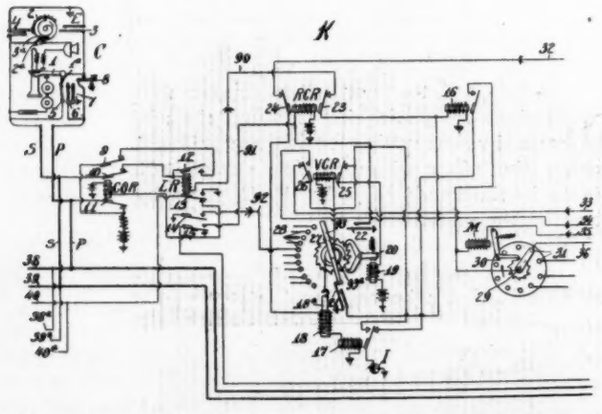
B. F. Gardner, Chicago, Ill., patent No. 975,346, No. 8, 1910, assigned one-half to S. R. Salinger, Chicago, Ill.

This invention provides a pair of insulated terminals projecting into the interior of a telephone transmitter mouthpiece and these terminals are connected to the secondary winding of an induction coil. The object of the invention is to cause discharges between these terminals to ozonize and disinfect the air within the mouthpiece. In the embodiment of the invention shown, the secondary winding is placed around the coils of the ringer so that whenever a telephone is called disruptive discharges are occasioned at the terminals aforesaid.

AUTOMATIC TELEPHONE SYSTEM.

A. H. Dyson, Chicago, Ill., patent 974,866, Nov. 8, 1910. assigned to Kellogg Switchboard & Supply Co., Chicago, Ill.

The invention herein relates to automatic telephony and is designed for use with the ordinary Strowger selector and connector switch. In accordance with the invention, each subscriber's line is provided at the exchange with passive called terminals appearing in the banks of a number of connectors and with passive calling terminals appearing in the banks of a number of line selectors. Each line selector has

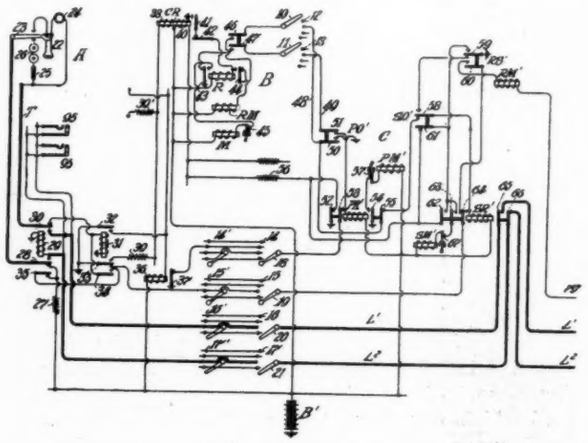


a first selector individual to and permanently linked with it. At *K* the master switch mechanism is indicated. The line relay is designated at *LR* and the vertical magnet at *PM* which lifts the line selector. The cut-off relay is shown at *COR*. The view herein illustrates only part of the mechanism, including the master switch mechanism.

TELEPHONE SYSTEM.

A. H. Dyson, Chicago, Ill., patent 975,338, Nov. 8, 1910, assigned to Kellogg Switchboard & Supply Co., Chicago, Ill.

The invention herein contemplates an automatic cord selecting telephone system using operators to complete a call, and which has a plurality of selecting switches which have access extremely heavy load without buckling or pulling over. ing idle selecting switches to establish connections with calling lines. Means are provided for restoring the master switch to a definite position after each selecting operation and there are also provided means, which are actuated during the operation of an actuating selecting switch, to free the master switch from further use. The invention also contemplates means for permitting the further operation of the master switch during



the use of the actuated selecting switch only in response to an additional call. When the calling party at *A* removes his receiver, the master switch *B* sets an idle line selecting switch *C* into operation to establish connection with the calling line. The operator thereupon gets the signal and, after ascertaining the non-busy condition of the line, completes the connection. The master switch *B* has wipers 10, 11, co-operating with contacts 12, 13 together with a motor magnet *M* for moving the wipers. *R* is the controlling relay and *RM* is the release magnet. A differential controlling relay *CR* governs the action of the relay *R*. The cord circuit strands are L^1 and L^2. The primary magnet is designated as PM^1 and the secondary magnet at SM^1 respectively. In the operation of the switch all the wipers are stepped around until the wiper 18 engages an ungrounded contact 14. Then the secondary movement of the wipers 19, 20 and 21 takes place and is continued until the wiper 10 engages the ungrounded contact 15 of the calling line, the wiper 18 not partaking of this secondary movement.

SEMI-AUTOMATIC TELEPHONE SYSTEM.

C. R. Austin, Longbeach, Cal., patent 957,105, Nov. 8, 1910.

The present invention relates to semi-automatic telephone systems in which operators are used at a central station and automatic sub-stations are employed. From the automatic sub-stations the subscriber's lines radiate. In the embodiment of the invention shown, the subscriber may call the central office directly by the usual operation of removing the receiver from the hook, and the operator calls any subscriber by automatic selection at the sub-central station. Another object of the invention is to provide for sending over the trunk lines from central the necessary calling impulses to select any subscriber's line from the sub-central station by the mere operation of the usual spring jack device at the central station switchboard. Another object of the invention is to provide for using the same trunks for the incoming calls that are used for the outgoing calls, thereby reducing the number of trunks necessary for a given number of subscribers' lines.

Equipment and Supplies

Good Qualities of Western Cedar.

The durability and other good qualities of Western cedar are bringing it into rapid favor throughout a constantly expanding territory. Particularly where large poles are required the Western cedar is found to fully meet specifications and its desirability is overcoming the handicap of freight rates so that it is gradually making its way farther and farther eastward.

Admirable Construction Using Western Cedar Poles.

The accompanying photographs show the high grade of poles which are produced in this western country, and their advantage, not only from the standpoint of appearance, but, as shown by the heavy guys on the line, although the photographer did not succeed in taking the wires and cable between poles, their ability to hold an extremely heavy load without buckling or pulling over.

TELEPHONY has received from Mr. C. P. Lindsley, Spokane, Wash., president of the Idaho Cedarmen's Association, a criticism of a paragraph in the article on Concrete Poles by Mr. Dobbs, which incidentally gives some valuable and authentic information about Western Cedar. Mr. Lindsley takes Mr. Dobbs to task, with reason, for his statement that few wooden poles are straight to begin with, and any unusual weight or side strain will cause them to buckle, warp and pull over, thus rendering the line unsightly.

Western Cedarmen are Proud of These Two Pole Makers.

Commenting on this statement and the reputation of Western Cedar, Mr. Lindsley says the Idaho or Western Cedar is almost universally straight and sound both top and butt. The percentage of rot in the butt in western poles is a fraction of the amount of rot usually seen in eastern timber. As for the rot in the top of the pole it is almost unknown in his country.

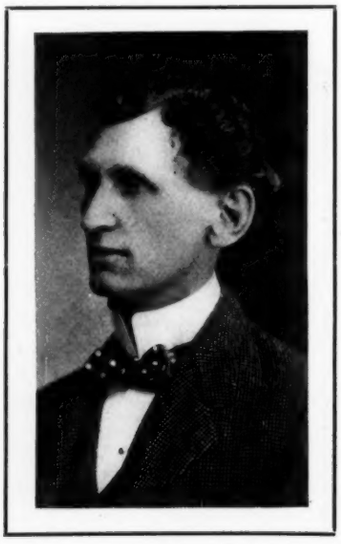
He also speaks of studies which have been made by western dealers establishing fully the strength of Idaho

One of the Pole Yards of Lindsley Brothers, Heavy Producers of Western Cedar.

cedar, and regarding this he quotes from letters as follows:

"Mr. Herman Von Schrenk of the Forestry Bureau of the United States to E. T. Stone, purchasing agent of the Soo Ry. Co., Minneapolis: 'I would say that Idaho cedar in many respects is superior to Michigan white cedar and is equal in lasting power.'

"Mr. E. T. Stone also received a letter from Mr. John Willis, timber agent of the Northern Pacific Ry. Co., for



Mr. J. E. Norling, Treasurer Monitor Automobile Works.

at least twenty years. In response to an inquiry as to the durability of Idaho cedar piling he says: 'No better cedar piling in the United States. He refers to piling, but there are the same qualities necessary in piling as there are in poles, and perhaps the requirements are a little more severe.

"Says Mr. Lindsley: "We have before us, dated Denver, Colo., October 29, 1907, signed by F. A. Cannon, superintendent of construction, Colorado Telephone Co., a letter which says:

"'I do not believe there is any difference in the life of the western and Michigan poles provided that they are both seasoned the same before used.'

"This we consider a statement of a man who is thoroughly unbiased as he has used both classes of timber in his construction, has made a study of it, and is in a position to judge.

"The Forestry Bureau of the United States (Circular 103) says that winter cut poles are superior to summer cut poles in lasting qualities, likewise a thoroughly seasoned pole is superior to a green or fresh cut pole, but there are no figures yet compiled to thoroughly establish the exact difference in the durability. These are the points that are vital, and when a person makes a statement that the Michigan cedar will last longer than the Idaho cedar he should be able to qualify his statement, or give evidence that the conditions of moisture, or the time of cutting was the same or different in order to make a thoroughly honest statement as to the comparative qualities of the two classes of poles."

The Idaho Cedarmen's Association makes the strongest claims regarding the straightness, strength, soundness and beautifully symmetrical and sightly appearance of a line built with Western cedar poles, and stands ready to furnish to all interested parties proof of the statements it makes.

The accompanying views show some of the interesting conditions under which Western cedar is produced and brought into concentrating yards. The young women who are doing their share to make Western cedar poles popular and interesting, were photographed on the ranch of W. E. Eldred in the Pend d'Oreille country.

The Monitor Commercial Car.

Over a century ago, Benjamin Franklin introduced to the world for the first time a spark of electricity, which discovery since has played an important part commercially.

The New Home of the Monitor Car.

When the horseless vehicle, or automobile, sprung into prominence several years ago, it was regarded as a novelty—the use of which was procurable only by the wealthier class. Times have rapidly changed and it is not unusual to find the automobile owned by the man of moderate means.

With the advent of the pleasure automobiles, minds were

A Trouble Wagon That Will Carry a Gang, and a Few Cross Arms.

set to thinking as to the practicability of its use for commercial purposes. The ordinary chassis of automobiles was temporarily used. Upon it were placed bodies of wagons, but it proved to be too frail.

About this period the Monitor Automobile Works con-

ceived the idea that a specially constructed chassis was necessary for commercial vehicles, and after considerable experimenting placed upon the market a car which was found to be correct in principle and practice.

The illustration here shows one of the types of Monitor cars which is adapted to telephone work. It is sturdily built, a good traveler and has a capacity of 2,000 pounds. It has demonstrated its dependability in recent severe endurance tests, capturing honors in several instances and under disadvantages, for perfect scores.

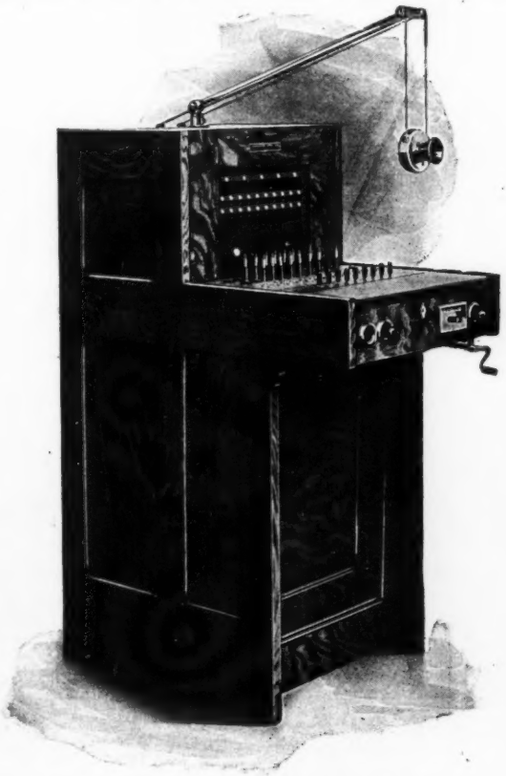
Commercial cars like this are a matter of convenience and utility to telephone companies and before long will be substituted entirely for horses and wagons.

The time wasted by the latter in traveling to places of trouble on the line amounts to considerable and the commercial automobile will have a tendency to reduce this loss. Furthermore upkeep costs of a power wagon are much lower in the aggregate. In construction work these cars are indispensable.

The steady growth of the Monitor Automobile Works business has necessitated the removal of its Chicago offices and factory to Janesville, Wis., where it now occupies a four-story plant—admirably located for railroad connections. Mr. J. E. Norling, who for some years participated actively in the management of the Monarch Telephone Mfg. Co., is treasurer of the company. Under his supervision the Monitor's sales should reach enviable proportions.

The New Stromberg-Carlson P. B. X. Board.

In the past a private branch exchange switchboard of ordinary capacity has been considered a large piece of apparatus, and there is no doubt that a number of possible

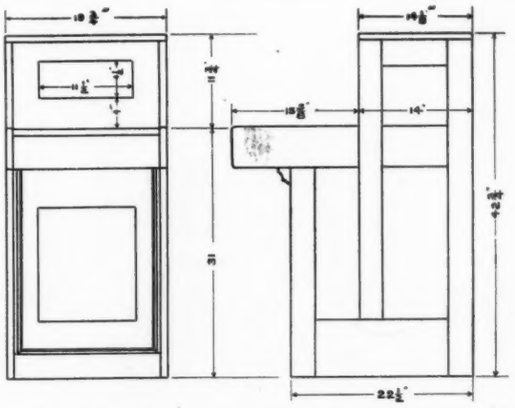


New Stromberg Compact P. B. X. Board.

purchasers have done without this necessary convenience simply for lack of room near their entrance where the operator might act as a bureau of information.

There is no reason for any present or future hesitation on this score. The new private branch exchange switchboard illustrated on this page occupies a floor space 22 1-2 by 19 3-4 in., which is not a bit more than covered by any rocking chair, and the extreme height is only 42 3-4 in.

Its depth from the front edge of the key shelf to the back panel is only 29 5-8 in., so the operator can see over



Front and Side Elevations of P. B. X. with Dimensions.

the top or around either side without a move of the head or body.

By removing front and rear panel and hinged keyboard, three short operations, one has instant access to every part.

All relays, condensers, connecting terminals, etc., are mounted facing the front of the board, but on a swinging gate, which, when swung open, allows the easiest access from the rear. But should the back of board be placed against the wall the removable front panel will afford access to these same parts.

This P. B. X. switchboard has a capacity of 30 lamp lines,

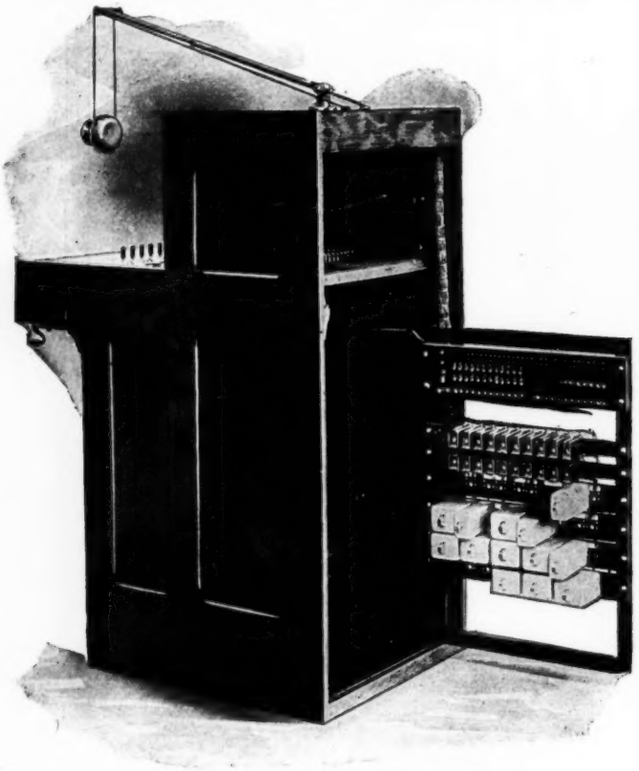
This View Shows Accessibility of Keys and Cords.

5 trunks, 8 cord circuits, 1 line pilot circuit, 1 guard pilot circuit, 1 operator's circuit, 1 generator circuit and 1 night bell circuit.

Many other improvements have been incorporated, such as separate line and individual metal mounted lamp jacks in strips of ten each, new vertical type keys, supervisory

lamp sockets with guards and a sanitary light weight operator's equipment.

This new compact P. B. X. switchboard is manufactured by the Stromberg-Carlson Tel. Mfg. Co., of Rochester, N. Y., who carry in stock, ready for immediate shipment, a

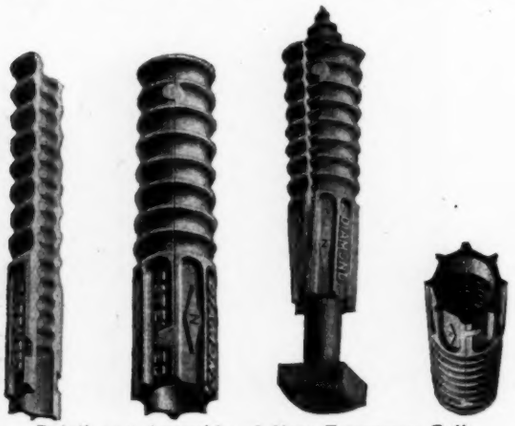


Rear of Board, Showing Swinging Rack.

number of these boards suitably equipped for the majority of requirements.

A New Lag Screw Expansion Bolt.

The Diamond Expansion Bolt Co., 90 West street, New York, has recently placed upon the market a new design of expansion bolt for lag screws, containing numerous patented essential improvements over the present design of lag screw expansion



Detail and Assembly of New Expansion Bolt.

bolts. The principal advantages claimed for the new design can be described as follows:

The shells were heretofore held together my means of a wire or spring which often became detached and allowed the parts to become separated. With the new shield clamping lugs are used which insure a positive attachment between the two sides.

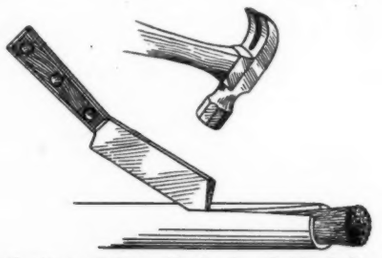
The holding power of the bolt is materially increased by means of a corrugated holding surface, which secures a tighter hold than was previously possible with a series of points as in the old style. To prevent the shield from turning in the wall when the lag screw is started, the longitudinal ribs at the outer portion of the shield form an octagonal section. The shield is slightly larger in diameter at this portion so as to insure the first grip to be on the longitudinal ribs.

Instantaneous Answering Service at Raleigh, N. C.

A new switchboard, the invention of Mr. W. A. Wynne, general manager of the Raleigh Telephone Co., Raleigh, N. C., has recently put into operation at that place, giving instantaneous answering service. With this board the subscriber simply takes off the telephone from the hook and repeats to the operator the number he wishes called, without waiting for her to make any inquiry. That is, he talks directly into the operator's head set. The switchboard was built, in accordance with circuits embodied in Mr. Wynne's patents, by the Kellogg Switchboard & Supply Co., Chicago.

The Bissell Cable Sheath Knife.

The advantage of this knife for cutting back cable sheaths is readily apparent. The handle is mounted at such an angle that a sheath can be cut back for a considerable length without danger of pinching the fingers between the handle and the sheath. The blade is made of one solid piece of steel 4½ inches long and 1½ inches wide, and the back is so heavy that it will stand all the hammering that any cableman can give it. The handle is made by riveting heavy pieces of leather on each side of an extension running out back of



Application of New Knife for Cable Splicers.

the blade. This knife is becoming very popular, and in fact is practically standardized and considered almost indispensable for good cable work.

J. Bishop & Co., Malvern, Pa., have been in business since 1842 as refiners of platinum, gold and silver. This firm built the first platinum works in the United States, and has continuously enjoyed a high reputation for the quality of its product, something which counts in purchasing so expensive a metal as platinum. The firm is reported to have been the first to melt platinum commercially, and its original process is said to have made possible the production of manufactured platinum in the varied forms in which it is marketed.

This company gives special attention to making platinum according to designs submitted by the intending purchaser; supplies platinum wire and plate for electrical purposes, and prepares and remakes promptly platinum wire. It also purchases platinum scrap. The reliability of this old concern has won it a splendid position in the platinum business.

Royse Electric Co., 124 South Meridian St., Indianapolis, Ind., announces a reorganization, involving a transfer of holdings in the old company to an entirely new management. The officers of the new company are: R. P. Oblinger, president; H. E. Rasmussen, vice-president; C. E. Kennedy, secretary, and R. E. McGregor, treasurer.

An Unusual Pole Shipment.

One of the views shown herewith is that of a 60-ft. car, loaded with 50, 55 and 60-ft. poles, shipped from one of the northern yards of the Naugle Pole & Tie Co. to the company's local yard in Chicago. Ordinarily this shipment would have to be made on two cars, but as far as our information extends this is the first shipment of its kind ever made.

The Naugle Pole & Tie Co. has yards located in Minnesota, Michigan and Wisconsin. Most of the material is shipped by rail direct from the yards to the customer. Part of the material is brought to Chicago from the Lakes in the company's steamer, the Geo. Burnham, both from the American and Canadian side.

Besides the Chicago concentrating yard this concern has a large yard at Pinconning, Mich., where it handles stock from the southern, as well as the northern, peninsula of Michigan, so as to have everything for quick eastern shipments. The company delivers nearly all of its Indiana, Ohio and other eastern orders from this yard. In fact, the company endeavors in every possible manner not only to deliver strictly Northwestern Cedarmen's Association specification stock, but to give good service, which is also of importance to telephone companies.

Unloading Poles from Steamer Geo. Burnham on Chicago River.

The unloading of both cars and steamer is done at the dock of the Naugle Pole & Tie Co., Paulina street, near Blue Island avenue, Chicago, as shown in the accompanying view. There it has a steam derrick with which all the loading and unloading is done. This is operated by steam and equipped with a 60-ft. stick of timber, which is used as a boom. The company also uses this steam loader for handling ties.

Everything in cedar is handled by this organization from a 3-in. post to a 70-ft. pole, and the company is always glad to show anyone interested the modern method it has of handling cedar poles, ties, etc., in its Chicago yard, which, it believes, is the largest and best equipped cedar yard in the country.

A 60-ft. Car Loaded with Naugle Poles.

THE ROME WIRE COMPANY, Rome, N. Y., manufacturers of bare and tinned copper wire, magnet, office and annunciator wire, rubber covered code and telephone wires, etc., is mailing to its friends a neat postal card calendar for the month of November. The upper part of the card bears the picture of an attractive young lady.

Unique Pole Advertising.

With this week's issue of TELEPHONY the Page & Hill company commence a new style of advertising, which promises to be intensely interesting and informing as it progresses. While all telephone companies need poles, yet the majority of users are not as familiar as they would like to be with the great care and careful forethought which must be exercised in their production. Each of their various advertisements will be a complete article in itself and in turn the methods of production, preparation for the market, handling, shipping, building of roads, camps, methods of cutting, tricks of the cutters, different methods of concentrating, seasoning, etc., will be discussed.

MR. E. F. KIRKPATRICK, Chicago, has recently moved his office to 438 First National Bank Bldg. As everybody knows, "Kirk" sells conduit, and his specialty is good material and quick delivery.

THE STROMBERG-CARLSON TELEPHONE MANUFACTURING CO., Rochester, N. Y., is having another red-letter bargain sale of central energy wall type, wide battery box type, and narrow battery box type telephones. Postal cards make it extremely easy to order immediately upon receipt of the mailing folders which the company sends out to notify its friends of these special prices.

A. E. FITKIN & Co., of New York, Boston and Philadelphia, dealers in high-grade bonds, whose Chicago office is at 218 La Salle street, will open an office in Hartford, Conn., on Nov. 1, under the management of Orlando C. Lewis, who was for a number of years with Poor's Manual of Railroads.

MR. J. C. LEWIS, former sales manager, has again identified himself with the sales department of the Kellogg Switchboard & Suply Co.

THE KELLOGG SWITCHBOARD & SUPPLY CO. has filed incorporation papers at Lansing, Mich., with an authorized capital of $500,000, as a means of transacting business in connection with its wood-working plant at Cassopolis, Mich. It now has at Cassopolis a $75,000 plant in which the cabinet work for Kellogg switchboards and telephones is turned out by the skilled employes.

Condensed News Reports

Officers of companies are earnestly requested to forward us promptly all financial and other statements as soon as issued and any items of interest as to their plants and systems

PERSONAL.

MR. FRANK J. CLARKE, who was equipment engineer for the Southern Bell Telephone and Telegraph Co., resigned that position recently to accept a position in the southern division of the American Telephone and Telegraph Co., with headquarters at Atlanta, Ga.

MR. VOLNEY DELOS COUSINS has entered the employ of the Pacific Telephone and Telegraph Co., in the plant engineering department, with headquarters in San Francisco, California. Mr. Cousins formerly was instructor in telephone engineering at Purdue University.

MR. THOMAS W. WILKINSON, who for five years was connected with the Missouri & Kansas Telephone Co., at Kansas City, Mo., in the plant department, and for two years was superintendent of the Auburn (Nebraska) Telephone Co., has accepted a position as superintendent of the Emporia Telephone Co., at Emporia, Kansas.

MR. E. D. SELMSER, vice president and manager of the Winnsboro Telephone Co., of Winnsboro, La., was a visitor at the recent Texas Independent Telephone Association convention in Dallas. Mr. Selmser was married a short time ago and made this a part of his wedding trip. Mr. Selmser is widely known throughout Texas, having formerly traveled in that state. His many friends in that part of the country join with TELEPHONY in wishing him much happiness.

MR. W. GILBERT THOMPSON, of Lebanon, Ohio, formerly general manager of the Hamilton Home Telephone Company, during a recent visit to TELEPHONY's office, stated that the reports which had been distributed locally in Ohio, to the effect that he was withdrawing from the telephone business here, are incorrect. Mr. Thompson, in addition to holding a heavy financial interest in the telephone company of Lebanon, has been the general manager of the company in active charge of the property. The fact that he will relinquish his immediate supervision to go to Oregon for a while this winter led to the statement that he was withdrawing, but Mr. Thompson reports that in fact he is more heavily interested in the property than ever.

MR. J. A. HUDSON, president of the Columbia (Mo.) Telephone Co., was the subject of an interesting little article in the Sturgeon Leader, one of Missouri's flourishing local newspapers. Aside from evidences that Mr. Hudson had indulged in his usual good humored pessimism to the effect that there is no money in the telephone business, this article interests Missouri telephone men because it shows the sincere regard which the writer holds for Mr. Hudson as a man, and builder of a sound telephone business. The article says: "Mr. Hudson was one among the best newspaper men in the state years ago, when he so successfully conducted the Macon *Times*. No town has a more loyal citizen than he. He is an optimist and a pusher."

NEW COMPANIES.

WILLIAMSON, DEL.—The Williamson rural telephone line was organized recently with J. W. Barnhart president and S. Z. Hawbecker secretary. The line will run from Williamson to Upton.

BOISE, IDAHO.—The Raymond Telephone Company, of Bear Lake County, has been incorporated with a capital stock of $10,000 by Thomas M. Mumford, George H. Hall and others.

TURNER, MICH.—Farmers and others interested in organizing a mutual telephone company met in Sherman Township and organized a company to be known as the Iosco and Arenac Telephone Company with 42 stockholders. Construction is to commence immediately. The following officers were elected: President, John Jordon; vice-president, Robert Wilkins; secretary and treasurer, Walter Pringle. Directors: Roy Eymer, John Schneider, Joseph Collins, John McNelley and C. A. Britt.

BLOOMING PRAIRIE, MINN. (Steele Co.)—The Blooming Prairie Farmers & Merchants Telephone Co., with an authorized capital stock of $50,000, has been incorporated by Carl B. Campbell, president; Paul P. Moffett, vice president; E. W. Cooley, treasurer, and Leonard Virtue, secretary, all of Blooming Prairie.

GORDONVILLE, MO.—The Gordonville Telephone Company has been incorporated by Lewis G. Hitt, A. S. Poe, M. H. Lupkes and others. Capital $1,000.

KILBOURNE, OHIO. (Delaware Co.)—The Kilbourne Mutual Telephone Co. has been incorporated by Charles F. Rodenfels, Claude S. Van Sickle, Charles W. Humes and Wm. W. Tegley.

HYDRO, OKLA.—The McCool Telephone Company has been incorporated with an authorized capital stock of $500, par value of shares $25. Incorporators are Frank M. Saunders, L. N. Cody, W. E. Inlow, C. E. Cole, F. R. Arnold, all of Hydro, Okla.

VOPAT, S. D.—The Union Telephone Company has been organized with an authorized capital stock of $1,000, par value of shares $50. The incorporators are L. E. Bogeurief, president, Gowdyville; John Enfield, Dunsmore; and John Kozel, Ziegler.

ERIN, TENN.—A new telephone company has been formed and chartered under the name of The Houston County Telephone & Telegraph Company, with a capital stock of $5,000. An organization has been effected by electing A. J. Mitchum, president; L. Uffelman, vice-president; G. P. Atcheson, secretary-treasurer, and J. F. Sullivan, general manager. The board of directors comprises W. R. Boone, G. W. B. Marable, A. J. Mitchell, S. W. Lashlee, L. Uffelman, G. B. Sullenger and G. P. Atcheson. The new company has bought all the lines radiating from the two exchanges at Erin and Stewart of the Home Telephone Company, which includes over 200 telephones. The company will soon improve the present system, besides building new lines and putting in some other exchanges.

ORCHARDS, WASH.—G. J. Mitchell and E. C. Curtain are the organizers of the Orchards Telephone Co.

FINANCIAL.

BETHEL RIDGE, KY.—The Big Four Telephone Company has increased its capital stock from $260 to $2,000.

DULUTH, MINN.—The board of directors of the Zenith Telephone Company has declared the regular quarterly dividend on the outstanding preferred stock at the rate of 7 per cent per annum.

OSTRANDER, OHIO.—The Ostrander Telephone Co. has increased its capital stock from $10,000 to $40,000.

WENATCHEE, WASH.—Owing to the many improvements that are in progress under the direction of the Farmers Telephone & Telegraph Co., a block of $20,000 worth of stock will be sold. The local company has had no difficulty in disposing of its stock, as it pays a guarantee dividend regularly.

FRANCHISES.

DE KALB, ILL.—The Exchange Telephone Co. has asked the city council for permission to install and operate a telephone system in the city.

CHEHALIS, WASH.—The Chehalis city council has granted J. Y. Coffman of this city a 15-year extension of his telephone franchise.

CONSTRUCTION.

MATTOON, ILL.—Mr. W. C. Lumpkins, manager of the Coles County Telephone Co., reports that his company has just completed the construction of a new building at Humboldt, Ill. It is a combination six-room cottage and exchange.

MANCHESTER, IA.—The Delaware County Telephone Company is replacing the original Farmers' Mutual lines near Ryan with its system. These lines were constructed several years ago by individuals forming companies and building their own private lines. This change will give the patrons a much better service.

SALT CREEK, IA.—The Salt Creek Telephone Company held a meeting at the Center schoolhouse for the purpose of making arrangements to buy cedar poles for its lines.

LEXINGTON, KY.—It is reported that the Lexington and Eastern Railway, of which John Marston, Jr., is chief engineer, will install a telephone train dispatching system on its line from Lexington to Jackson, Ky.

HANNIBAL, MO.—The Bluff City Telephone Company has practically completed arrangements, it is reported, for the organization of a $100,000 toll line company with the purpose of building a toll line from Hannibal to Wright City. There connections will be made with the Kinloch system of St. Louis. This was decided upon at a meeting of the board of directors of the company held recently. J. J. F. Davidson has been authorized by the board of directors to make contracts with the Kinloch company for the purpose of connecting the wires at Wright City or at any other convenient place designated by the Hannibal concern. Upon the completion of the building of the additional wires the installing of a new and larger toll board will be necessitated.

The business of the local company has increased to such an extent since E. B. Marmaduke took hold of the management that this latest move was deemed expedient. He has been in this city a little over two years and in that time has added almost 500 subscribers. There are now 1,600 city users of the Bluff City Telephone Company and 400 rural subscribers.

SALMON CITY, MONT.—The Gilmore & Pittsburg Telephone Co. is placing 300 40-ft. poles in Salmon, and as soon as this

work is completed cable will be strung. Switchboards will be installed in Leadare, Armstead and Gilmore. H. M. Shaw is superintendent for the company.

ILION, N. Y.—The Utica Home Telephone Company will soon install a common battery exchange in this place. It has applied for permission to open the streets for the purpose of installing cable.

LIMA, OHIO.—Early in the coming year the Lima Telephone and Telegraph Company will erect a new fireproof exchange building between North Main and Elizabeth streets. The investment in the land, building and switchboard, which represents $50,000 in itself, will exceed $100,000. The company has been improving its outside plant for the last two years, and about $80,000 has been expended in underground conduits and cables.

The new building is to be 50x80 feet and will probably be three stories. The structure will be built of concrete and brick. The front portion of the building will be occupied by offices and the switchboard and in the rear will be the storehouse. The new plant is designed to provide for 10,000 subscribers.

During September 100 telephones were installed and the record for October will exceed that. Over 4,000 subscribers are now served by the company. The Lima Telegraph and Telephone Company is purely a home institution, all of the stock except a few scattering shares, being owned here. The officers and directors of the company are: president, D. J. Cable; vice-president, S. S. Wheeler; treasurer, W. H. Duffield; secretary, G. H. Metheany; J. B. Kerr, C. H. Cory, J. D. S. Neely, C. F. Stoltzenbach, J. R. Sinclair and J. B. Hoge, the last of Cleveland.

NAPOLEON, OHIO.—The council of the village of Holgate, 12 miles south of here, has ordered Receiver Ralph P. Brown, of the Napoleon Telephone Co., to put in the new telephone poles. Under a court order the receiver will begin work this week. The present system of wires in Holgate will be partly replaced by cable.

LAKEVIEW, ORE.—Work will be commenced soon in repairing the private telephone line owned by S. B. Chandler and other ranchers on the route between here and Silver Lake, a distance of 110 miles. The lines and poles will be thoroughly overhauled, and all house instruments put in first-class shape.

DOYLESTOWN, PA.—The right of way for a telephone line from Plumsteadville to Doylestown has been secured by the Keystone Telephone Company, of Philadelphia.

CROSBYTON, TEX.—The Crosbyton Telephone Company is to extend its line at once to Floydada. Mr. Prutle, who went there recently from Chicago, is to have charge of a large force of men, as foreman, in carrying on the extension work. Manager F. McDonald has also been very busy carrying on the work of rebuilding the system in Crosbyton. New poles are being put in and new wire is being strung, and the temporary system at first put in is being replaced with better material and apparatus. Modern exchange equipment has been installed. With the extending of the line to Floydada the northern long distance connections will be made with consequent convenience to business.

FALFURRIAS, TEX.—The Fallfurrias Telephone Company has just completed the overhauling of its system in and about that place, and also its toll lines to Alice. A. J. Hodges of Kerrville assisted him.

COWICHE, WASH.—Anson S. White, president and general manager of the Cowiche Telephone Co., reports that active extension work of his company is almost at an end. A six-mile extension of the line west from Cowiche Central will be built and telephone service is to be carried as far as the mouth of the Tieton tunnel and then south several miles. Mr. White reports that the service is growing much more rapidly than he had anticipated.

ELECTIONS.

MASSENA, IA.—A meeting of the Massena Independent Telephone Company was held recently for the election of officers and transacting other business. G. J. Anstey was re-elected president: D. P. Hogan was elected vice-president and manager; A. B. Downey, secretary, and J. J. Hogan, treasurer. The company voted to purchase a building. It also voted to put in new improvements.

ROCHESTER, N. Y.—A meeting of the stockholders of the Rochester Telephone Company was held recently for the purpose of electing a board of directors for the ensuing year. The following directors were elected: H. Wheeler Davis, Bernard Dunn, Edward W. Peck, J. Craig Powers, Gustave Erbe, George R. Fuller, Jacob Gerling, Fred C. Goodwin, Louis Greisheimer, F. N. Kondolph, Dr. J. N. Lee, W. Roy McCanne, Charles S. Rauber, George F. Roth, George C. Seager, Albrecht Vogt, J. Foster Warner, Frederick W. Zoller, Horace F. Atwood and Adolph Lomb.

HUNTSBURG, OHIO.—The directors of the Huntsburg Telephone Company recently elected are: H. T. Clark, A. Fasinger, B. L. Drake, Geo. Hannum, Wells Buell, Mr. Williams and H. A. Pinney.

RANGE LINE, WIS.—The Range Line Telephone Company elected the following officers: L. J. O'Connell, president, and Chas. O'Brien, secretary.

MISCELLANEOUS.

WASHINGTON, D. C.—The following appears in the Daily Consular & Trade Reports, issued by the Bureau of Manufactures under date of November 9, File No. 5772: A report from an American consular officer in Latin America states that there is a movement on foot by a local company to install in place of the present telephone system a common battery system, employing the use of an electric switchboard and other appliances to make complete and modern system. It is suggested that American firms wishing to bid on this apparatus should get in touch with the person in charge. As the purchasing will be for cash, he expects to receive the very lowest figures.

ATLANTA, GA.—The Atlanta Telephone and Telegraph Company suffered considerable damage by fire recently. The switchboard, to which about 7,000 subscribers are connected, was totally destroyed.

ST. MARIES, IDAHO.—A company is being organized to build a telephone line into the reservation southwest of town for the accommodation of the settlers. The board of county commissioners has appointed viewers to estimate the cost of a wagon road eight or ten miles into the territory to be tapped by the proposed telephone line.

SHELBYVILLE, ILL.—The Farmers Mutual and the Melcher Independent lines centering here have been merged. Business is done over the Mutual system.

PLEASANT PLAIN, IA.—The Pleasant Plain Telephone Company has made quite an addition to its equipment by the purchase of the interests of the Brighton Mutual Telephone Co.

BALDWIN, KANS.—The Baldwin Telephone Co. has been sold to F. M. Campbell of Yates Center.

STOUTSVILLE, MO.—The stockholders of the Stoutsville division of the Monroe County Telephone Co. recently held a meeting for the purpose of voting whether or not various lines will be rebuilt with cedar poles.

HACKETTSTOWN, N. J.—The wires of the Hackettstown Telephone & Telegraph Co. were damaged by a heavy storm recently. The weight of snow upon the wires broke off the crossarms on the poles, especially in the rural districts. The Bell Telephone Co.'s lines were also damaged.

PAINESVILLE, OHIO.—Since April, 1896, when the Painesville Telephone Company issued its first directory, a gain of 1,058 subscribers has been made. Service is now given to 1,195 subscribers.

RACINE, WIS.—The City authorities have contributed for the installment of a police patrol flash light system. The new system will consist of thirty boxes with ninety red lights and be equipped with telephones.

BASSANO, ALBERTA, CAN.—The growth of the telephone system in Alberta has been marked. Calgary has 3,179 telephones, and Edmonton, 2,264. The other leading cities and towns are as follows: Letherbridge, 722; Strathcona, 450; Medicine Hat, 409; MacLeod, 284; Wetaskiwin, 244; Claresholm, 194; Pincher Creek, 179; Camrose, 169; High River, 165; Red Deer, 159; Lacombe, 155; Stettler, 128; Olds, 125; Vegreville, 119; Fort Saskatchewan, 115; Taber, 104; Cardston, 102; Lloydminister, 102; Didsbury, 100. All other towns have less than 100 telephones.

UNDERGROUND.

ROCHESTER, N. Y.—The Rochester Telephone Company is installing considerable additional underground cable in its system.

A Newspaper Man's View of a Telephone Strike.

A dispatch in some of the Kentucky papers appeared under the head "Hello Girls of Frankfort Got Mad," as follows:

"A walk-out is threatened by the 'hello' girls employed here by the Cumberland Telephone Company. The girls resent the charge that they have been trying to conduct a beauty shop and a voice culture establishment instead of an exchange.

"The superintendent from Louisville dropped in the operating room here, and, it is said, found seven drops down in front of one girl, who was busily engaged massaging her face with cold cream and admiring herself in a mirror.

"The superintendent was here to investigate a complaint that an important political conversation over the telephone had been tipped off by a girl."

Telephones in Syria.

Definite plans have been made to establish a telephone system connecting towns in the Lebanon Mountains, near Beirut, reports vice-consul Lucien Memminger, Beirut, Syria.

If established, this will be the first telephone system in operation in Syria.

American manufacturers interested in the project should address the concessionaires, whose addresses are obtainable from the Bureau of Manufactures, Washington, D. C.

Out of the Mail Bag

November is the Thanksgiving month, and TELEPHONY's subscribers, judging from the tone of the letters received, are in an appropriate, grateful and appreciative spirit. Needless to say, these expressions of appreciation and good will make the editors correspondingly thankful.

Here is an extract from a letter written by H. W. Hamlin, manager of the Milo Telephone Co., of Milo, Maine: "I have never taken a paper or magazine that I thought more of than TELEPHONY. I have found more instruction in your paper for my business than any other I have ever taken."

The Milo company's letterhead shows the Independent Shield, and announces that the company connects with Lakeview, Chandler, Five Islands, Boyd Lake and La Grange.

T. Frank Tuthill, of Riverhead, N. Y., member of the electrical contracting firm of Overton & Tuthill, writes: "I have been a reader of TELEPHONY about five years, and find it very interesting and helpful to the telephone man, and it should be in the hands of everyone interested in the telephone business."

J. E. Green, of Charter Oak, Ia., in sending in a change of address, says: "I can't get along without TELEPHONY."

The Argyle Telephone Co., Argyle, Minn., in sending a check for another year's subscription, says: "We consider TELEPHONY indispensable to anyone in the telephone business."

From far away Tillanook, Oregon, G. E. Rummel, wire chief of the Pacific Telephone & Telegraph Co., sends in a renewal, and adds: "I find I cannot get along without TELEPHONY."

H. S. Crawford, superintendent of the Wausau Telephone Co., Wausau, Wis., renews and asks for a missing issue to make his TELEPHONY file complete. "I have been a regular subscriber to TELEPHONY ever since it started," he writes, "and have the volumes bound since 1903. I should certainly miss it, so all you have to do is to set your price and I will pay, for there's nothing to take its place."

C. G. Fitzsimmons, a Chicago subscriber, in reporting a change of address, says: "Please make this change at once as I do not want to miss a single copy. I have been taking the paper for several years, and would feel very much lost if I should miss a single copy."

Thomas M. Snedden, of Pittsburg, Pa., writes: "You have an excellent paper. I think Mr. Kelsey's articles are great."

L. P. Barnes, of Ainsworth, Neb., volunteers this terse judgment of TELEPHONY: "It is the best of its kind in my opinion."

C. H. Harris, manager of the Mutual Telephone Co., of Okeene, Okla., writes: "I have been saving copies of TELEPHONY for the past two and a half years, and as they were taking up considerable space I decided to tear out all that I thought was valuable in a technical way and destroy the rest. One would be surprised to see how much there is in the paper that I don't like to part with on looking through the file. I have torn it all out being careful not to mar the leaves and find that I have several hundred pages of very valuable matter that it would be hard to obtain elsewhere."

Rollo Stien, engineer of the Slate Belt Telephone & Telegraph Co., at Nazareth, Pa., in asking for an additional copy of an issue gone astray, says, in explanation: "Please forward at once. We don't want to miss a single copy."

H. M. Shingle, manager of the Orange (Texas) Home Telephone Co., writes an interesting letter concerning the valuable assistance given him and his company by the distribution of "A Fight with an Octopus" in his community. "We get them just in time," says Mr. Shingle, "and they have done us a lot of good. The secretary of the State Independent Telephone Association says our trouble has been we haven't let the public know how strong we (the Independents) are in the United States and what we are doing."

TELEPHONY is in business to acquaint the people with the growth of the Independent telephone industry, and hopes Texas will do her share in this direction.

Another letter from Texas comes from Dallas, and the writer frankly says: "I am not in the telephone business now, but I have been taking your paper just for the sound common sense things I find in it."

In sending in his renewal F. Hammond, Chesterhill, O., writes: "I find a lot of good articles in your journal and was much interested in the one in the October 15 issue "Chasing Trouble" by J. C. Fuller. Such articles as this are very helpful to anyone who wants to do good work in a small exchange, as many of the instances mentioned are such as to give ideas that are not readily found in books. There are very few troublemen outside of the larger companies, and as this article shows there are some in them who are thoroughly familiar with all kinds of testing. Also few of the small companies having up to 600 or 800 subscribers use any resistance-measuring instruments at all, so that much of the poor service in the rural districts is caused by a lack of understanding of this kind of work. One of the greatest troubles of the small rural companies is in keeping the lines and apparatus in a condition to give even a passable quality of service so that anything that will help along this line, as an ohmmeter or some such instrument will, is to be commended."

Writing from Ithaca, N. Y., Walter J. Black says, in his letter of renewal: "I value your paper very much and feel that I have lost something each week that I do not receive a copy."

W. T. Frier, of the Russell (Kansas) Telephone Co., in a letter to the editor relating to a quotation from TELEPHONY printed in the report of the South African Institute of Electrical Engineers, says: "TELEPHONY travels all over the world, doesn't it? I have failed to find a Kansas exchange that it does not visit."

An employe of the New England (Bell) Telephone Co. who lives and works in Massachusetts but whose name, for obvious reasons is withheld, says in his letter of renewal: "I have been an interested reader of TELEPHONY for the past two years and, while I think in some respects you are unfair to the Bell, in the main there is much foundation for the attitude of the Independents toward the so-called monopoly. One thing, there is certainly little chance for advancement of young men, no matter how ambitious and industrious they may be, if they haven't got the influence of a friend at court. Many of the brightest young fellows connected with the Bell in the east are going west to take positions with the Independents. These positions may not pay more than they are getting now, but there is a free field and no favor, which is not the case in the Bell organization. TELEPHONY is certainly doing a good work for everybody in the telephone business. Competition is needed and is appreciated especially by the men who are in the rank and file. Keep up the good work."